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TRANSCRIPT OF RECORD.

UPREME COURT OF THE UNITED STATES.

No. 233.

GORGE PARKS, GRANT B. TURNER, WILLIAM A. TAYLOR, ND JAMES A. VAUGHN, PARTNERS AS TURNER, PARKS CO., APPELLANTS,

vs.

JONATHAN L. BOOTH.

AEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF OHIO.

FILED OCTOBER 6, 1877.

SUPREME COURT OF THE UNITED STATES.

No. 233.

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APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF OHIO.

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1 THE UNITED STATES OF AMERICA,
Northern District of Ohio:

At a stated term of the circuit court of the United States within and for the northern district of Ohio, begun and held at the city of Cleveland, in said district, on the first Tuesday in October, being the third day of said month, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States of America the 101st.

Present, the honorable Martin Welker, district judge. Among the proceedings then and there had were the following, to wit:

JONATHAN L. BOOTH *vs.* GEORGE PARKS, GRANT B. TURNER, WILLIAM A. TAYLOR, & JAS. A. VAUGHN.	2249.	Chancery.

Be it remembered that heretofore, to wit, on the 21st day of April, 1871, came the complainant, by his solicitors, and filed in the clerk's office of said court his bill of complaint, which is in the words and figures following, to wit:

Bill.

United States circuit court, northern district of Ohio.

JONATHAN L. BOOTH *vs.* GEORGE PARKS, GRANT B. TURNER, WILLIAM A. TAYLOR & JAMES A. VAUGHN.

To the judges of the circuit court of the United States for the northern district of Ohio:

Jonathan L. Booth, of the city of Rochester, in the northern district of New York, a citizen of the said State of New York, brings this his bill of complaint against Geore Parks, Grant B. Turner, William A. Taylor & James A. Vaughn of Cuyahoga Falls, in the county of Summit, in the northern district of Ohio.

2 And thereupon your orator complains and says:

That heretofore and before the 20th day of September, 1859, your orator had invented a new and useful improvement in grain separators which had not been known or used by others before his discovery and invention thereof, and was not at the time of his application for a patent therefor hereinafter stated in public use or on sale with his consent or allowance. That thereupon, and before the said 20th day of September, 1859, your orator made application in writing by a petition presented to the Commissioner of Patents describing said improvement, and praying that letters patent might be issued to him therefor, and accompanied the same by his oath that he was a citizen of the United States, that he did verily believe that he was the original and first inventor or discoverer of the said improvment, and that the same had not to the best of his knowledge or belief been previously known or used, and paid into Treasury of the United States the sum of thirty dollars, and did also duly deliver such a written description of his invention or discovery, and of the manner and process of making and constructing the same, accompanied by drawings and a model of said invention, as was

by law required, and did in all respects conform to and comply with the acts of Congress in such case made and provided.

And your orator further says, that thereupon the United States of America issued its letters patent under the seal of the Patent Office dated the 20th day of September, 1859, and signed by the Secretary of the Interior, and countersigned by the Acting Commissioner of Patents, whereby the United States of America did grant, according to law, unto your orator, his heirs, administrators, or assigns, for the term of fourteen years from the date thereof the full and exclusive right and liberty of making, constructing, using and vending to others to be used the said improvement in grain separators, a description whereof was annexed to and made a part of said letters patent, to which said letters pat-
3 ent or a duly certified copy thereof now here ready to be produced your orator craves leave to refer.

And your orator further says, that prior to the 25th day of September, 1860, said letters patent being inoperative or invalid by reason of a defective or insufficient description or specification of said invention, were by your orator surrendered to the Commissioner of Patents, and thereupon such proceedings were duly had in conformity with the acts of Congress in such case made and provided that on the 25th day of September, 1860, there were duly issued to your orator by the United States of America, under the seal of the Patent Office, signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents, amended letters patent securing to your orator, his heirs, administrators and assigns, for the term of fourteen years from the 20th day of September, 1859, the full and exclusive right and liberty of making, constructing, using and vending to others to be used the said improved grain separator, a description whereof was given in an amended schedule annexed to and made a part of said amended letters patent, to which amended letters patent, or a duly certified copy thereof, now here ready to be produced, your orator craves leave to refer.

And your orator further says, that prior to the 29th day of November, 1864, said amended letters patent being inoperative or invalid by reason of a defective or insufficient description or specification of said invention, were by your orator surrendered to the Commissioner of Patents, and thereupon such proceedings were duly had in conformity with the acts of Congress in such case made and provided, that on the 29th day of November, 1864, there were duly issued to your orator
4 by the United States of America under the seal of Patent Office signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, amended letters patent securing to your orator, his heirs, administrators and assigns, for the term of fourteen years from the 20th day of September, 1859, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said improvement, a description whereof was given in an amended schedule annexed to and made a part of said amended letters patent, to which said amended letters patent or a duly certified copy thereof, now here ready to be produced, your orator craves leave to refer.

And your orator further says, that immediately after the issuing of said letters patent and said amended letters patent he put the invention described in and secured by the same into public use, by manufacturing and putting on sale the said improved grain separator, and is still in the exclusive possession of the rights secured thereby.

And your orator further says, that the rights so secured by said amended letters patent is of great value, and that your orator would make and would have made large profits from the manufacture and sale

of said improved grain separator, if not interfered with and prevented by the unlawful acts of the defendants done and threatened to be done as hereinafter stated.

And your orator further says, that since the first day of January, 1860, the defendants, George Parks, Grant B. Turner, William A. Taylor & James A. Vaughn, in violation of the rights so secured to your orator by said letters patent and said amended letters patent, have at Cuyahoga Falls aforesaid, made, used and vended to others to be used grain separators constructed in all respects in the manner described
5 in the specifications attached to said amended letters patent, and are now engaged in making and offering for sale, and selling a large number of grain separators so constructed, and the said defendants do unlawfully refuse to desist from making, using, and selling the same in violation and infringement of your orator's rights secured to him as aforesaid, and without his consent or allowance.

All which actings and doings are contrary to equity and good conscience.

In consideration whereof, and for as much as your orator can only have adequate relief in this honorable court, where matters of this kind are alone cognizable. To the end, therefore, that the said defendants may respectively, full, true, and perfect answers make upon respective corporal oaths, according to the best of their respective knowledge, information, and belief, to all and singular, the matters and charges aforesaid, and that as fully and particularly as if the same were again repeated; and that the said defendants and each of them may be enjoined and restrained from further making, using, or vending to others to be used, the said improvement in grain separators, the exclusive right to make and vend which is secured to your orator by said amended letters patent, and that the defendants may be decreed to account with & pay over to your orator the profits of which the defendants have deprived your orator by the infringement of said patent, and by such unlawful use, manufacture, and sale of said improvement in grain separators; and t at the defendants may be enjoined from making, using, or vending such separators so by them unlawfully made, used, and vended; and that such separators so made by them that now are or may here-
6 after be in their possession, may be broken up and destroyed; and that your orator may have such other and further relief as the nature of his case shall require and as shall be agreeable to equity.

May it please your honors the premises being considered to grant unto your orator, a writ of injunction issuing out of and under the seal of this honorable court, or issued by one of your honors according to the form of the statute in such case made and provided, enjoining and restraining the said defendants, their attorneys, agents, and servants, from making any such improved grain separator as is described in said amended letters patent last issued to your orator, and also may it please your honors to grant unto your orator a writ of subpœna directed to the said George Parks, Grant B. Turner, William A. Taylor, & James A. Vaughn, commanding them on a day certain, therein to be named, to be and appear in this honorable court, then and there to answer the premises, and to stand to, perform, and abide such further order, direction, and decree as may be made against them.

And your orator, as in duty bound, will ever pray, &c.

JONATHAN L. BOOTH.

WILLEY, CARY & TERRELL,
Solr's for Complainant.

W. F. COGSWELL,
Of Counsel.

NORTHERN DISTRICT OF NEW YORK,
Monroe County, ss:

On this 19th day of April, 1871, before me personally appeared Jonathan L. Booth, who, being by me duly sworn, deposes and says that he is the plaintiff in the above-entitled action; that he has
7 heard read the foregoing bill of complaint, and knows the contents thereof; that the same is true of his own knowledge, except as to the matters therein stated on information and belief, and as to those matters he believes it to be true.

[SEAL.] JOS. D. HUSBANDS,
U. S. Commissioner in & for said District.

And, thereupon, there was duly issued herein out of said court, a certain writ of subpœna which is in the words and figures following, to wit:

8 THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

The President of the United States of America to the marshal of the northern district of Ohio, greeting:

You are hereby commanded to summon George Parks, Grant B. Turner, William A. Taylor, and James Vaughn, if they be found in your district, to be and appear in the circuit court of the United States, for the northern district of Ohio aforesaid, at Cleveland, on the first Monday in June next, to answer a certain bill in chancery filed and exhibited in said court against them by Jonathan L. Booth.

Hereof they are not to fail under the penalty of the law thence ensuing, and have you then and there this writ.

Witness the honorable Salmon P. Chase, Chief Justice of the United States, this 21st day of April, A. D. 1871, and in the 95th year of the Independence of the United States of America.

[SEAL.] EARL BILL, *Clerk.*

Memorandum.

The said defendants are required to enter their appearance in this suit, in the clerk's office of said court, on or before the first Monday of June, 1871, otherwise the said bill may be taken pro confesso.

EARL BILL, *Clerk.*

9 And afterward, to wit, on the 25th day of April, 1871, said subpœna was returned to said clerk's office by said marshal, endorsed as follows, to wit:

Return.

NORTHERN DISTRICT OF OHIO, *ss:*

On the 25th day of April, A. D. 1871, I made service of this writ by delivering to each of the within named parties, George Parks, Grant B. Turner, William A. Taylor, and James Vaughn, at Cuyahoga Falls, Summit County, Ohio, a true and certified copy of this writ.

R. HASTINGS,
U. S. Marshal.
By S. M. SMEAD,
Deputy.

Leave to amend bill.

And afterward, to wit, at the April term of said court, to wit, on the 8th day of July, A. D. 1871, on motion to the court by Messrs. Willey, Cary & Terrell, solicitors for the complainant, it is ordered that said complainant have leave to amend his bill filed herein forthwith.

And afterward, to wit, on the 10th day of July, A. D. 1871, came said complainant, by his solicitors, and filed herein in said clerk's office his amended bill of complaint, which is in the words and figures following, to wit:

Amend' bill.

NORTHERN DISTRICT OF OHIO, *ss:*

Circuit court of the United States, April term, 1871. In chancery.

JONATHAN L. BOOTH }
vs.
GEORGE PARKS ET AL. }

To the judges of said court:

10 The said Jonathan L. Booth, complainant, by leave of the court first had and obtained, now comes and amends his petition herein by adding to the prayer thereof next after the words "agreeable to equity," the words following: "And especially that the complainant may recover of said defendants in addition to the profits to be accounted for by them the damages the complainant has sustained by said infringement, and that the same may be assessed under the direction of said court & the damages trebled or increased as provided for in case of verdicts found in actions on the case for the infringement of patents."

And your petitioner will ever pray, &c.

By WILLEY, CARY & TERRELL,
His Sol'rs.

Leave to answer.

And afterward, to wit, at the April term of said court, to wit, on the 27th day of July, A. D. 1871, on motion it is ordered by the court that the said defendants have leave to file their answer herein on or before the first day of September, A. D. 1871.

And afterward, to wit, on the 1st day of September, A. D. 1871, came the respondents, by their solicitors, and filed in the clerk's office of said court their answer, which is in the words and figures following, to wit;

Answer.

To the honorable the judges of the circuit court in and for the northern district of Ohio:

The joint and several answer of George Parks, Grant B. Turner, William A. Taylor, and James A. Vaughn to the bill of complaint of Jonathan L. Booth.

11 These defendants, now and at all times hereafter, saving and reserving unto themselves all and all manner of benefit and ad-

vantage of exception which may be had or taken to the many errors, uncertainties and imperfections in the said bill of complaint contained, for answer thereunto, or unto so much thereof as these defendants are advised it is material or necessary for them to make answer to, answering say:

That these defendants are informed and believe, and therefore admit, that letters patent of the United States were granted on the 20th day of September, 1859, and bearing that date, to the said complainant for an alleged improvement in grain separators, and that the said complainant obtained a reissue of said letters patent, bearing date the 25th day of December.

But the said defendants on information and belief deny that the said complainant was the original and first inventor of the alleged improvement in grain separators described in the reissued letters patent recited in his said bill of complaint, or of any substantial or material part thereof, which was not known or used prior to the alleged invention thereof by said complainant, but these respondents are informed and verily believe, and therefore aver that machines for separating grain from oats, cockle and other foreign substances and impurities containing substantially the same devices and similar in all essential features of construction and combination to the machine described in the letters patent mentioned in said complainant's bill of complaint, were known and used for more than two years prior to the date of said complainant's application for said letters patent.

12 And these defendant' further answering say, on information and belief, that prior to any alleged invention thereof by said complainant, and for more than two years before the date of his application for said letters patent, the same invention as is described and claimed in said reissued letters patent mentioned in said complainant's bill of complaint, or substantial and material parts thereof, were described and shown in and by the following recited letters patent, to wit:

Letters patent of the United States granted to James Starr, dated the 9th day of September, 1843, for an improved winnowing machine.

Letters patent of the United States granted to Stephen M. Yarman (or Yeaman) dated the twentieth day of June, 1846, for an improved machine for winnowing wheat.

Letters patent of the United States granted to Jonathan Bean, No. 8504, dated the 11th day of November, 1851, for improvement in winnowing machines.

Letters patent of the United States granted to Benjamin T. Trimmer, No. 21036, dated the 27th day of July, 1858, for improvement in machines for cleaning grain.

Letters patent of the United States granted to James B. Crist, No. 23903, dated the 10th day of May, 1849, for an improvement in grain separators.

And also in the specification and drawings attached to the application of Charles B. Scoville, for letters patent of the United States filed in the Patent Office, on the 12th day of July, in the year 1852.

And these respondents further answering, on information and belief, say that grain separators substantially the same in construction and operation as that described as the alleged invention of said complainant, have been in public use for more than two years prior to the application of said complainant for his said original letters patent

13 of 20th September, 1859, and prior to any alleged invention thereof by said complainant, by sundry persons, whose names and

places of residence, as well as the places where the same were used, are not yet ascertained by these respondents, but which these respondents crave leave to set forth in a supplemental answer to be filed by them so soon as they are sufficiently informed in relation thereto.

And these respondents further answering, on information and belief deny that the said complainant is in exclusive possession of his alleged invention, or that the issue to him of said original letters-patent of 20th September, 1859, or of said reissued letters-patent of 29th November, 1864, vested in said complainant any exclusive right in said alleged invention, but they allege that by reason of the prior knowledge and use of said improvements by others, the said reissued letters-patent are of no effect to vest any such exclusive right in said complainant.

And these respondents further answering, deny that they are making or have made, used, and vended to others to be used grain separators constructed in all respects in the manner described in the specifications attached to said amended letters-patent, and are now engaged in making and offering for sale and selling a large number of grain separators so constructed as charged in said complainant's said bill of complaint, but they admit that they are making and selling grain separators substantially similar in construction and operation to that described in certain reissued letters-patent of the United States, granted on the 11th day of June, 1861, to one James A. Vaughn, one of these respondents, for which invention letters patent of the United States were originally issued to him on the 24th day of April, 1860, and reissued as aforesaid; and these respondents aver that they have a just and lawful right so to do.

14

And these respondents, further answering, say, that in so far as the grain separators so constructed and sold by them are similar in the devices employed and in the construction thereof to the devices described in the reissued letters-patent in the said complainant's bill of complaint set forth, they were well known and in common use prior to the alleged invention thereof by said complainant, but that there is a substantial, material, and patentable difference between the grain separators so made and sold by them, and the alleged invention of said complainant described in his said reissued letters-patent.

And these respondents, further answering say, that they believe they are not infringing and exclusive rights of said complainants by reason of such manufacture and sale of grain separators as described in said reissued letters-patent to James A. Vaughn, but that they have a right so to do.

And these defendants pray to be hence dismissed with their reasonable costs and charges in this behalf most wrongfully sustained.

GEO. PARKS.
G. B. TURNER.
WILLIAM A. TAYLOR.
JAMES A. VAUGHN.

W. BAKEWELL,
Defendants' Solicitor.

UNITED STATES OF AMERICA:
Northern District of Ohio, County of Cuyahoga, ss:

Before me, a notary public in and for said county, personally appeared George Parks, Grant B. Turner, William A. Taylor, and James A. Vaughn, who being duly sworn do depose and say that the facts set forth in the foregoing answer so far as they are stated on

their own knowledge are true, and so far as stated upon information and belief they verily believe them to be true.
15 Sworn to and subscribed this 31st day of August, A. D. 1871.
[SEAL.] C. P. HUMPHREY,
Notary Public.

And afterward, to wit, on the 11th day of September, A. D. 1871, came the complainant, by his solicitors, and filed in the clerk's office of said court his replication which is in the words and figures following, to wit:

Replication.

Circuit court of the United States for the northern district of Ohio.

JOHN L. BOOTH ET AL. *vs.* GEORGE PARKS ET AL. } No. 2259. Replication.

The replication of John L. Booth et al., complainants, to the answer of George Parks, et al., defendants.

These repliants, saving and reserving unto themselves now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto say that they will aver, maintain, and prove their said bill of complaint to be true, certain, & sufficient in law to be answered unto, and that the said answer of the said defendants is uncertain, untrue, and insufficient to be replied unto by these repliants, without this, that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed or avoided, traversed or denied, is true, all which mat-
16 ters and things these repliants are and will be ready to aver, maintain, and prove as this honorable court shall direct, and humbly pray as in and by their said bill they have already prayed.
WILLEY, CARY & TERRELL,
Complainants' Solicitors.

Cont'd.

And afterward, to wit, at the April term of said court, A. D. 1871, to wit, on the 30th day of September, A. D. 1871, this cause is continued to the next term of this court.

Cont'd.

And afterward, to wit, at the October term of said court, A. D. 1871, to wit, on the 30th day of December, A. D. 1871, this cause is continued to the next term of this court.

Leave to file amended answer.

And afterward, to wit, at the January term of said court, to wit, on the 10th day of January, A. D. 1872, on motion and by consent of parties, it is ordered that said defendants have leave to file an amendment to their answer instanter.

And thereupon, on said 10th day of January, A. D. 1872, came said defendants, by their solicitors, and filed in the clerk's office of said court their amended answer, which is in the words and figures following, to wit:

Amended answer.

United States circuit court, northern district of Ohio. In equity.

JONATHAN L. BOOTH
vs.
GEO. PARKS, GRANT B. TURNER, WM. A. TAYLOR, & JAS. A. VAUGHN.

To the honorable the judges of the circuit court in and for the northern district of Ohio:

17 The further answer of George Parks, Grant B. Turner, William A. Taylor, and James A. Vaughn, defendants, to the bill of complaint of Johnathan L. Booth, complainant.

These defendants, by leave of the court here first had and obtained, further answering on information and belief, answer & say: That the said Jonathan L. Booth was not the first and original inventor of the alleged improvement described and claimed in his said reissued letters patent of November 29th, 1864, but that grain separators of substantially the same construction and operation in some or all material parts thereof were prior to the said alleged invention of said complainant, and for more than two years before the date of his application for original letters patent therefor, described and shown in letters patent of the United States No. 12341, granted to John Bean and Benjamin Wright Feb. 6th, 1855, for improvement in smut machines.

Letters patent of the United States granted to Samuel Canby, December 28th, 1852, for grain separators.

Letters patent of the United States granted to W. H. Angel and M. Coffan August 3d, 1858, for wheat separator.

Application of John Bean for letters patent of the United States for grain separator filed May 19th, 1863.

Application of D. Flickenger and S. Krim for letters patent of the United States for machine for cleaning grain filed May 28th, 1842.

Also that grain separators of substantially the same construction and operation as in said reissued letters patent described and claimed have been made and in public use for more than two years prior to the application of said complainant for his said original letters patent, and prior to the date of his said alleged invention, at the Etna Mill in
18 Akron, Summit County, State of Ohio, by the firm of Chamberlain & Company, formerly proprietors of said mill, and by their successors in business, and that such prior construction and use were known to Parvin Eames, now deceased, who formerly resided in Akron aforesaid; to John Scupholm, now residing in Cuyahoga Falls, county and State last aforesaid, and to others, due notice of whose names and places of residence will be given to complainant or his counsel.

Also at the manufacturing establishment formerly carried on by John Bean, about one and one half miles southerly from Bellville in the county of Richland, State of Ohio, and by the said John Bean, and that such prior construction and use were known to John Bean, now residing in Hudson, in the county of Lenawee, State of Michigan, and to Louis

Young, now residing in Belleville aforesaid, and others, due notice of whose names and residences will be given as aforesaid.

Also at the manufacturing establishment of John Bean, in Hudson, county of Lenawee, State of Michigan, by the said John Bean, and that such prior construction and use were known to John Bean aforesaid, residing at Hudson aforesaid, and others, due notice of whose names and residences will be given as aforesaid.

These defendants, further answering, say that the state of the art at the date of the complainant's said alleged invention was such as will appear from the evidence, of which notice is given in this and in defendants' original answer, and from such other evidence as will be produced, that complainant's said reissued patent is not for a patentable subject matter, and that said patent cannot properly be construed as covering the grain separator as made by these defendants and patented to
19 one of them, as set forth in their original answer, and that these defendants are not guilty of any infringement thereof, and also that the said complainant has interpolated into the specifications attached to and forming a part of his said reissued letters patent of November 29th, 1864, a description of the grain separator made by these defendants, and has described another and a different invention from that which constituted the subject matter of his said original patent, and that said reissued letters patent are invalid.

These defendants, further answering on information and belief, answer and say that at or about the date of complainant's said original patent or shortly thereafter, the said complainant learned of the invention made by and afterwards patented to one of these defendants, as set forth in defendants' original answer; that after making a small number of grain separators such as were described in his said original patent, and attempting to put the same into practical use, complainant ascertained that such grain separators did not possess such a degree of utility as to render them a marketable or saleable commodity; that he thereupon abandoned the manufacture of such grain separators, and commenced and for a time continued the manufacture and sale of the grain separators described in the reissued letters patent of the United States granted June 11th, A. D. 1861 (Reissue No. 90, whole No. 1195), to James A. Vaughn, one of these defendants, whereof the said Vaughn was the first and original inventor, the equitable title to which last-named reissued patent is now vested in these defendants (the legal title being held by said Vaughn). That the said complainant has thereby infringed the said last-named patent, and the exclusive rights of these defendants thereunder, and as against these defendants has no legal or equi-
20 table claim or right of action; and also that the said facts constitute an abandonment on the part of the said complainant of any exclusive right to which he was or might have been entitled under his said original letters patent, and that his said reissued letters patent were for an alleged invention which had been abandoned, and are void and invalid.

And defendants pray as in their original answer they have already prayed.

GEO. PARKS.
G. B. TURNER.
W. A. TAYLOR.
JAS. A. VAUGHN.

NORTHERN DISTRICT OF OHIO,
County of Summit, ss :

Before me, the undersigned authority, duly authorized to administer oaths, personally came Geo. Parks, G. B. Turner, Wm. A. Taylor, and Jas. A. Vaughn, who, being duly sworn, did severally depose and say each for himself that he has read or heard read the foregoing supplemental answer so as to become familiar with the contents thereof; that so far as the facts therein set forth are within his own knowledge they are true, and so far as they are derived from the information of others he verily believes them to be true to the best of his knowledge and belief.

GEO. PARKS.
G. B. TURNER.
W. A. TAYLOR.
JAS. A. VAUGHN.

Sworn and subscribed before me this 26th day of December, 1871.
[SEAL.] C. P. HUMPHREY,
Notary Public.

21 And afterwards, to wit, on the 25th day of January, A. D. 1872, came again the defendants by their solicitors, and filed in the clerk's office of said court their further amended answer, which is in the words and figures following, to wit:

Amend't to answer.

United States circuit court, northern district of Ohio. In equity.

JONATHAN L. BOOTH
vs.
GEORGE PARKS, GRANT B. TURNER, WM. A. TAYLOR & JAS. A. VAUGHN.

To the honorable the judges of the circuit court in and for the northern district of Ohio:

The further answer of George Parks, Grant B. Turner, Wm. A. Taylor, and James A. Vaughn, defendants, to the bill of complaint of Jonathan L. Booth, complainant.

These defendants, by leave of the court here first had and obtained, further answering on information and belief, answer and say, that the said Jonathan L. Booth was not the original and first inventor of the alleged invention described and claimed in his said reissued letters patent of Nov. 29th, 1864, but that grain separators of substantially the same construction and operation in some or all material parts thereof had been made and in public use for more than two years prior to the application of said complainant for his said original letters patent, and prior to the date of his said alleged invention, at the Ætna mills, in Akron, Summit County, Ohio, by the firm of George Buel and Company, and that the same was known to John Scupholen, now residing in Cuyahoga Falls, county and State aforesaid.

22 Also at the grist mill of S. M. Wirts, in Hudson, Lenawee County, Michigan, and by the said S. M. Wirts, and that the same was known to John Bean, of Hudson aforesaid.

And these defendants, further answering, say that for the purpose of deceiving the public, the description and specification filed by the said

complainant in the Patent Office, and forming a part of his said reissued patent, was made to contain less than the whole truth relative to his invention, and that the said specification is ambiguous, and does not particularly point out and distinctly claim the part, improvement, or combination claimed to be the invention of said complainant, and that said reissued letters patent are void.

And these defendants pray as in their original answer they have already prayed.

GEO. PARKS.
GRANT B. TURNER.
WILLIAM A. TAYLOR.
JAS. A. VAUGHN.

NORTHERN DISTRICT OF OHIO,
County of Summit, ss:

Before me, the undersigned authority, duly authorized to administer oaths, personally came George Parks, G. B. Turner, Wm. A. Taylor, and Jas. A. Vaughn, who, being duly sworn, depose and say each for himself that he has read or heard read the foregoing answer; that so far as the facts therein stated are within his own knowledge they are true, and so far as they are derived from the information of others he verily believes them to be true.

[SEAL.] C. P. HUMPHREY,
Notary Public.

23 *Cont'd, &c. Hearing & taken under advisement.*

And thereupon this cause was continued from term to term of said court until the January term thereof, A. D. 1874, at which said January term, to wit, on the 13th day of March, A. D. 1874, this cause came on to be heard upon the pleadings and testimony, and the arguments of counsel being concluded, the cause is taken under advisement by the court.

Cont'd.

And afterward, to wit, at the January term of said court, to wit, on the 6th day of April, A. D. 1874, this cause is continued to the next term of this court.

Decree.

And afterward, to wit, at the April term of said court, to wit, on the 9th day of May, A. D. 1874, this cause came on for hearing upon the bill of the complainant, the answer of the defendants, and the amendments thereto, and replication, testimony, and exhibits, and was argued by counsel.

Whereupon the court having taken said cause under advisement, do now find that the equity of this cause is with the complainant, and that the facts stated in said bill of complaint are true, and especially that the reissued letters patent granted to said complainant on the 29th day of November, 1864, is and was valid, and for a new and useful invention as therein claimed, and that the defendants, since said last-named date in the grain separators manufactured, used, and sold by them, have contained the invention claimed and secured to said complainant by said letters patent.

Therefore it is ordered, adjudged and decreed that said reissued letters patent are good and valid; that said complainant was the original and first inventor of the improvements therein described and claimed, and that the defendants have infringed upon said letters patent,
24 since said last-named date, and upon the exclusive rights of the complainant under the same.

And it is further ordered, adjudged, and decreed that the complainant do recover of the defendants the profits, gains and advantages which the said defendants have received, or which have arisen or accrued to them from said infringements of said patent by the manufacture, use, or sale of the improvements described and secured by said reissued letters patent, since November 29, 1864, and also such damages in addition to said profits as the complainant may have sustained by reason of said infringements.

And it is further ordered, adjudged, and decreed that said complainant do recover of the defendants his costs in this suit to be taxed.

And it is further ordered, adjudged, and decreed that it be referred to C. B. Beach, esq., as a special master commissioner hereby for that purpose appointed, residing in the city of Cleveland, to ascertain, take and state, and report to the court an account of the gains, profits and advantages which the said defendants have received, or which have arisen or accrued to them since November 25, 1864, from infringing the said exclusive rights of said complainants by the manufacture, use, and sale of said improvements patented in said reissued letters patent, and also what damages in addition thereto the complainant has sustained by reason of said infringements.

And it is further ordered, adjudged, and decreed that the complainants on such accounting have the right to cause an examination of said defendants ore tenus or otherwise, and also the production of the books, vouchers, and documents of the defendants, and that the said de-
25 fendants attend for such purpose before said master from time to time as said master shall direct.

Cont'd, &c.

And thereupon this cause was continued from term to term of said court until the October term thereof, A. D. 1875.

And afterward, to wit, on the 24th day of November, A. D. 1875, the report of said master was filed herein in said clerk's office, which is in the words and figures following, to wit:

Report.

United States circuit court, northern district of Ohio.

JONATHAN L. BOOTH
vs.
GEORGE PARKS, GRANT B. TURNER, William A. Taylor, & Jas. A. Vaughn.

The undersigned, duly appointed and qualified by this honorable court as a special master, "to ascertain and take and state and report to the court an account of the gains, profits, and advantages which the said defendants have received, or which have arisen or accrued to them since the 29th day of November, 1864, from infringing the said exclusive rights of the said complainant by the manufacture, use, and sale of the said improvements described in said reissued letters patent, and also what

damages in addition thereto the complainant has sustained by reason of said infringements" having caused an examination of the said defendants to be made before him, and having also made an examination of the books, vouchers, and other documents of the said defendants
26 pertaining thereto, and, having considered the arguments made and submitted by counsel for the respective parties, makes the following report:

The defendants, from the 10th day of January, 1865, up to the 28th day of April, 1871, manufactured and sold of the inhibited machines 431. (See statement, as prepared by Parks, contained in book accompanying this report, pages 23-38. Said book was prepared for the convenience of the court and the master from the statement filed by the defendants, marked Defendant's Account; and also as a statement of plaintiff's damages submitted with his argument.) Of these 431 machines, the defendants sold to their agents, Todd & Co., Baxter & Co., & A. R. Halterman, 363. Of these 431 machines the defendants sold, on their own account, or to parties other than their said agents, 68.

The machines manufactured and sold by the defendants are distinguished by the numbers 2, 3, & 4.

The cost of manufacture of No. 2 machine is	$45 00
" " " " 3 "	60 00
" " " " 4 "	100 00

See last item of Parks' statement, marked Defendants' a/c.

Of the number 2 machines the defendants sold to parties other than their agents, 33 machines at an average price of $84.17; cost of No. 2, 45.00—$39.17.

27 Of the No. 3 machines the defendants sold to parties other than their agents 20 machines at an average price of $108.33; cost of No. 3, 60.00—48.33.

Of the No. 4 machines the defendants sold to parties other than their agents 15 machines at an average price of $192.00; cost of No. 4, 100.00—92.00.

Of the No. 2 machines the defendants sold to their agents 187 at an average price of $69.12; cost of No. 2, 45—24.12.

Of the No. 3 machines the defendants sold to their agents 168 at an average price of $90.82½; cost of No. 3, 60.00—30.82½.

Of the No. 4 machines the defendants sold to their agents 8 at an average price of $150.00; cost of No. 4, 100.00—50.00.

RECAPITULATION.

Item No. 1.—*Machines sold by defendants to parties other than agents.*

No. 2: 33; average profit, 39.17		1,291 51
No. 3: 20; " " 48.33		966 60
No. 4: 15: " " 92.00		1,380 00
		3,638 11

Item No. 2.—*Machines sold by defendants to their agents.*

No. 2: 187; average profit, 24.12		4,510 44
No. 3: 168: " " 30.82½		5,178 60
No. 4: 8: " " 50.00		400 00
		$10,089 04

28 George Parks was the financial man of the firm, attending principally to the office work. (See testimony, Geo. Parks, ans.

to ques. 2, to wit: "I have mostly attended to the office work and some outside work.")

Parks put the profits realized by the firm in the manufacture and sale of said machines at 25 % of the selling price. (See Parks' testimony, ans. to quest. 7: "I suppose that the amount of profits * * * would be about ¼ of the aggregate amount of the account I have furnished," i. e, Exhibit marked Defendant's Account.)

Baxter & Co., of Chicago; A. K. Halterman, of St. Louis, & Todd & Co., of St. Louis, were agents of the defendants for the sale of these machines. (See Parks' testimony, ans. to quest. 13 & 14.)

The machines were sold to these several agents at prices as set forth in the defendants' a/c. (See Parks' testimony, ans. to ques. 12, second examination.)

Defendants had no further interest in the sale of machines and no control of them after they had sold them to their agents. (See Parks' testimony, ans. to quest. 15; also ans. to ques. 11 & 11½, 2d examination, to wit: "We had no further interest beyond the price we charge them, as expressed in statement, i. e., Exhibit Defendants' Account.")

The master is, therefore, of the opinion that the expenses of advertising, traveling, circulars, &c., &c., which the defendant may
29 have incurred in the sale of the 363 machines to their agents (so called) are not such expenses as should be considered by him in determining the profits which the defendants made, as shown in the recapitulation item No. 2. That, inasmuch as they had no further interest in, or control of, the machines after they had been sold and delivered to their respective agents, and as also their said agents were directly charged with the machines, as shown in defendant's account, the master regards all of said incidental expenses (except bad debts, of which none are proven) as voluntary upon the part of the defendants; and, furthermore, if the master were of the opinion that such expenses should be considered, it would be impossible for him, from the evidence before him, to determine how much or what proportion of the expenses of the general business of the defendants (as specified in answer to x-ques. 8, G. B. Turner, testimony) should be charged to this a/c. (See testimony, Turner, x-ques. 13, 14, 15, 16, 17, 18, & 19.)

As to the cost of manufacture of these machines (Nos. 2, 3, & 4, of defendants, and the corresponding machine of complainant) the master is unable to determine with any degree of certainty, owing to the insufficiency of testimony upon the point. The defendants, if any one, have it in their power to show what proportion of their capital is employed in the manufacture of this machine, and thereby furnish the master with the necessary data from which to compute interest of capital as a credit to them. They have failed so to do, and, as it appears to the master, have with purpose avoided such an exposition of their affairs as might afford accurate information upon this and other points of doubt. Upon cross-examination they are unable or fail to give satisfactory in-
30 formation as to amount of materials and labor required in construction, and rest upon an estimated cost as per Ex. Defendants' Account, while the complainant in answer to ques. 1., examination-in-chief, says that he has not manufactured or sold machines "myself" since the re-issue, Nov. 29, 1864, and goes on to specify cost, &c., prior to that date, which in the opinion of the master is not competent in this behalf. He therefore reports the cost of the respective machines (of defendant) as stated in defendants' account, the same being the most positive evidence upon the point; and furthermore, the master thinks that in view of all the evidence he is justified in finding that the defendants

in fixing the cost of their machines as specified embraced all the elements of cost which he would be bound to consider if the details were before him.

From the testimony of F. W. Baxter, and others whose knowledge and experience are extensive in the premises, it appears that prior to the invention and introduction of the Booth machines there were no machines in the market which in their purpose and operation were successful in the treatment or handling of grain as set forth in said invention; that in 1859-'60, the Vaughn & Booth machines were the only competing machines in the market (Baxter's testimony, page 36, ans. to ques. 55); also that the art was new (page 39, ans. to ques. 58), and the master is unable to discover that the defendants would have been authorized to manufacture, sell and use other machines not having the invention patented to Booth in his re-issue 64, which would have been successful or marketable for the purposes of the Booth or Vaughn machines, or which could have been sold in competition with either of said machines, or that there was any machine of the character and
31 purpose of these open to the public which they (defendants) might have manufactured, sold, and used with equally beneficial results. Hence the master fails to see the application of the rule urged by the defendants as laid down in—

Mason vs. Graham, sup. ct. 7, O. G. 833.
Truman vs. Hitchcock, " " " 1055.
Littlefield vs. Perry, " " " 967.
Murray vs. Whitney, 14 Wall., 620, 5 Fish., 494.
Black vs. Thorn, 7 O. G., 176.
Whitney vs. Mowry, 5 Fish., 141.

And is unable to determine upon any separation of the distinct rights, if such there be, which the defendants have confused; and finds that the complainant is entitled to the profits, &c., on the machine as a whole.

To sum up, "as to the gains, profits and advantages which the said defendants have received, or which have arisen or accrued to them since the 29th of November, 1864, from infringing the said exclusive rights of the said complainant by the manufacture, use, and sale of the said improvements patented in said re-issued letters patent," the master reports:

First. The complainant is entitled to recover profits, &c., as follows:

On machines sold by defendants to their agents:

No. 2:	187 @ average profit of	$24.12	4,510 44
No. 3:	168 " " " "	30.82½	5,178 60
No. 4:	8 " " " "	50.00	400 00
			10,089 04

On machines sold by the legitimate personal efforts of the defendants themselves, twenty-five per centum of the aggregate amount of such sales:

	Forward		10,089 04
32	Forward		10,089 04
	No. 2: 33 @ average price	$84.17	2,777 61
No. 3:	20 " " "	108.33	2,166 60
No. 4:	15 " " "	192.00	2,880 00
	25%	7,824.21	1,956 05
			13,045

Booth has collected from various sources as set forth in his testimony from parties using what are undoubtedly the Vaugn machines (which the master reports as a credit to def'ts)	2,101 00
Total am't due compl't on ⅜ of profits, &c	$9,944 09

The master is further of the opinion that the act of July 8th, 1870, is purely remedial in its application to this action, and therefore embraces in this report such damages as in his opinion might under the former practice be recovered at law.

This statement of opinion as to the construction of said act is made in compliance with the request of counsel that the basis of the master's finding on this portion of the decree might be set forth.

The master reports that the complainant is entitled to recover as damages his expenses in conducting this suit, as follows:

Item 1	50 00
4	10 00
11	50 00
12	300 00
13	37 20
	$447 20
Bro't forward	447 20
No. 15	60 00
19	30 00
23	30 00
24	60 00
	$627 20

33 In the opinion of the master the complainant is also entitled to a fair compensation for the time he has spent in the prosecution of this action.

The complainant in answer to Q. 9, ex. in chief, says that he has not spent less than six weeks and that his time is worth $10 per day. The master allows on this item 42 days at $10.00 per day, $420.00. The other expenses set forth in said answer are not allowed.

Interest on the amount of profits on the machines sold is not allowed.

The master finds no damages other than as reported above.

Recapitulation.

Complainant entitled to recover of defendants as follows:

On machines sold by defendants to their agents	10,089 04
On machines which they sold to parties other than their agents	1,956 05
	12,045 09
Credit by amount collected by complainant from parties who were infringing (Vaughn machines)	2,101 00
	$9,944 09

On account of expenses incurred in the prosecution of suit	627 20
Compensation for time	420 00
	$10,901 29

Respectfully submitted.

C. B. BEACH, *Master.*

34 *Statement filed with master's report.*

BOOTH'S DAMAGES.

The following 16 pages are taken from Park's report of sales. The royalty or license fee on each size machine as established by Booth has been estimated on each machine in the following manner, to wit: On No. 2, each, $95.00; on No. 3, $105.00; and on No. 4, $150.00. On these amounts respectively interest, commencing one year after the date of each sale, up to January 1st, 1875, at the rate of 6% has been computed and added to the royalty embraced in each item. The footing on each page shows the aggregate damages, these footings being carried forward to page 17, where the combined footing and total amount on machines to Jan. 1st, 1875, is found:

[1]

1865.				
Jan. 10	Baxter & Co	6—2	570	876 05
Feb'y 13	" "	4—3	420	639 65
" 23	Lind & Bucher	1—4	150	229 65
Mar. 14	Holmes & Blanchard	1—3	105	160 42
" "	Baxter & Co	4—2	380	580 58
" 28	J. Damp	1—2	95	144 93
Apr. 20	Todd & Co	1—2	95	144 56
" "	" "	1—3	105	159 78
May 5	F. Shoemaker	1—2	95	144 34
" 8	Holmes & Blanchard	1—3	105	159 48
" 23	Todd & Co	1—2	95	144 06
June 12	Baxter & Co	2—2	190	287 47
" "	" "	2—3	210	317 73
" 13	F. Shoemaker	1—2	95	143 72
July 12	Todd & Co	2—3	210	316 91
	Carried to page 17		2,920	4,450 03

35 [2]

1865.				
July 29	Todd & Co	1—3	105	158 06
Aug. 15	Baxter & Co	1—2	95	142 75
" "	" "	1—3	105	157 78
" 16	" "	2—3	210	315 33
" 19	Todd & Co	1—2	95	142 69
" "	" "	1—3	105	157 68
" 26	Baxter & Co	1—3	105	157 58
" 29	Halteman	1—2	95	142 53
Sep. 4	Todd & Co	2—2	190	284 87
" "	" "	2—3	210	314 86
" 11	Halteman	1—2	95	142 33
" "	"	1—3	105	157 32
" 13	Baxter & Co	1—2	95	142 30
" "	" "	1—3	105	153 27
" 26	" "	2—3	210	314 09
	Carried to page 17		1,925	2,887 44

[3]

1865.				
Oct. 2	Baxter & Co	2—2	190	284 02
" 9	" "	2—2	190	283 80
" 6	Halteman	1—3	105	156 89
" 18	John Damp	1—2	95	141 76
Nov. 27	Holmes & Blanchard	1—4	150	222 83
Dec. 17	Halteman	1—3	105	155 64
" 19	Baxter & Co	1—2	95	140 79
" "	" "	1—3	105	155 61

Statement filed with master's report—Continued.

1866.					
Jan. 3	Baxter & Co	2—3	210	310	73
" 11	Halteman	1—3	105	155	23
" 16	" "	1—2	95	140	37
Feb. 12	Baxter & Co	2—3	210	309	26
" 17	J. Larpey & Bro	1—2	95	139	82
" 20	Holmes & Blanchard	1—3	105	154	49
	Carried to page 17		1, 855	2, 751	24
36 [4]					
1866.					
Feb. 20	Halteman	1—2	95	139	78
" "	"	3—3	315	463	47
Mar. 2	Daggett, P. M	1—4	150	197	47
" 10	A. E. Elsen	1—2	95	139	51
" 17	Todd & Co	1—3	105	154	07
" 22	" "	1—3	105	153	99
Ap'l 3	Halteman	1—2	95	138	97
" 19	"	1—2	95	138	87
" "	Todd & Co	2—2	190	277	55
" "	" "	2—3	210	306	99
May 11	Halteman	2—3	210	306	25
June 1	"	2—2	190	276	42
" 8	Baxter & Co	1—3	105	152	64
" 29	Halteman	3—3	315	456	80
July 12	Baxter & Co	2—3	210	304	11
	Carried to page 17		2, 485	3, 604	89
[5]					
1866.					
July 13	Todd & Co	2—2	190	275	12
" 21	Turner & Pettit	1—2	95	137	44
" 27	Todd & Co	1—4	150	216	85
Aug. 2	Baxter & Co	2—3	210	303	42
" 4	Todd & Co	2—3	210	303	35
" "	Halteman	2—2	190	274	52
" 9	Baxter & Co	2—3	210	303	17
" 15	Todd & Co	2—2	190	274	11
" 29	Baxter & Co	1—2	95	136	83
Sep. 6	Herald & Maltz	1—2	95	136	71
" 10	Halteman	3—3	315	453	08
" "	Todd & Co	3—3	315	453	08
" 28	Harvey & Sons	2—3	210	301	42
" 29	Halteman	1—3	105	150	70
" "	Todd & Co	1—3	105	150	70
	Carried to page 17		2, 685	3, 870	50
37 [6]					
1866.					
Oct. 2	Baxter & Co	2—3	210	301	32
" "	" "	1—2	95	136	31
" 13	Todd & Co	2—3	210	300	93
" 15	Halteman	2—3	210	300	86
" "	Harvey & Sons	1—3	105	150	43
" 22	Baxter & Co	1—3	105	150	31
" 24	" "	3—2	285	407	88
" 30	Halteman	2—2	190	271	74
" "	Todd & Co	1—2	95	135	87
Nov. 22	Baxter & Co	2—3	210	299	53
" 23	Todd & Co	2—3	210	299	49
" "	Halteman	2—3	210	299	49
Dec. 3	"	2—2	190	270	68
" 4	Baxter & Co	4—2	380	542	61
" 12	Todd & Co	1—3	105	149	44
	Carried to page 17		2, 810	4, 016	89
[7]					
1866.					
Dec 23	Halteman	3—3	315	447	72
1867.					
Jan'y 1	Baxter & Co	2—2	190	265	80
" "	" "	2—3	210	298	20
Feb. 2	Todd & Co	3—2	285	403	09
" 9	Baxter & Co	4—2	380	537	00
" "	Halteman	4—3	420	593	53
Mar. 9	Allen & Co	1—4	150	211	30
" 21	D. Lind & Co	1—2	95	133	64

Statement filed with master's report—Continued.

May 1	B. Dodge & Co.	1—4	150	210 00
" 18	Halteman	4—3	420	586 81
" 27	Todd & Co.	2—2	190	265 18
June 25	Baxter & Co.	3—3	315	438 11
" "	" "	2—2	190	264 26
July 17	Todd & Co.	2—3	210	291 34
	Carried to page 17.	.....	3,520	4,945 98

38 [8]

1867.				
July 22	Todd & Co.	3—3	315	436 70
" 26	Halteman	2—3	210	291 03
Aug. 13	H. Reihl	3—3	315	435 65
" "	Baxter & Co.	3—2	285	394 16
" 17	Todd & Co.	2—3	210	290 29
" 24	" "	2—2	190	262 43
Sep. 2	Baxter & Co.	1—4	150	206 95
" 13	Todd & Co.	2—4	300	413 35
" 17	" "	2—2	190	261 67
" 21	Baxter & Co.	2—3	210	289 07
Oct. 19	" "	1—2	95	130 34
" "	" "	1—3	105	144 06
Nov. 2	" "	1—4	150	205 45
" 8	" "	2—2	190	260 05
" 11	Todd & Co.	2—2	190	259 96
	Carried to page 17.	.....	3,105	4,281 16

[9]

1867.				
Nov. 11	Baxter & Co.	2—2	190	259 06
Dec. 2	" "	2—2	190	259 32
" 19	" "	2—3	210	286 02
1868.				
Jan. 6	" "	3—2	285	387 36
Feb'y 21	" "	2—2	190	256 75
" "	Todd & Co.	4—2	380	513 51
" "	" "	4—3	420	567 56
Mar. 4	Halteman	2—3	210	283 40
" "	Baxter & Co.	2—3	210	283 40
" 30	C. W. Coe & Co.	2—4	300	403 20
Ap'l 17	Halteman	2—2	190	255 62
" "	"	2—3	210	281 85
" 18	Todd & Co.	1—4	150	201 30
May 6	Warwick & Bardsdale	1—4	150	200 88
	Carried to page 17.	.....	3,285	4,439 73

39 [10]

1868.				
May 13	Baxter & Co.	4—2	380	508 44
" 26	" "	2—2	190	253 81
" "	" "	3—3	315	420 79
June 17	Halteman	2—2	190	253 37
" "	"	3—3	315	420 05
" 17	Baxter & Co.	2—2	190	253 12
July 3	J. S. Miller	1—2	95	126 32
" 9	J. H. Spaulding	1—3	105	139 52
" "	Todd & Co.	4—2	380	504 89
" "	" "	4—3	420	558 04
" 31	Baxter & Co.	3—3	315	417 38
Aug. 10	Halteman	2—2	190	251 47
" "	Todd & Co.	4—2	380	502 93
" "	" "	4—3	420	555 87
" 17	" "	1—2	95	125 62
	Carried to page 17.	.....	3,980	5,291 62

[11]

Aug. 17	Halteman	2—3	210	277 69
" 22	Baxter & Co.	3—3	315	416 27
" 31	" "	2—2	190	250 80
Sep. 2	" "	3—2	285	376 11
" 5	Todd & Co.	1—2	95	125 33
" 8	Halteman	1—3	105	138 47
" 10	Baxter & Co.	1—4	150	147 75
" 17	Pritz & Weirsham	1—2	95	125 14
" "	Baxter & Co.	3—2	285	375 39
" 25	S. S. Thompson	1—3	105	138 16

Statement filed with master's report—Continued.

Oct. 3	Halteman	2—3	210	276 08
" 19	G. B. Turner	1—3	105	137 76
" "	Halteman	2—2	190	249 28
" 23	Baxter & Co	2—2	190	249 15
" 30	" "	2—2	190	248 94
	Carried to page 17		2, 720	3, 582 32
40 [12]				
1868.				
Nov. 10	Baxter & Co	4—2	380	497 17
1869.				
Jan. 8	Baxter & Co	3—2	285	370 18
Feb. 1	" "	5—2	475	614 89
" "	" "	3—3	315	407 77
" "	" "	3—3	315	407 51
" 6	Todd & Co	6—2	570	737 39
" "	" "	3—3	315	406 88
" 18	" "	1—2	95	122 48
Mar. 6	G. B. Turner	1—2	95	122 00
Apr. 5	J. S. Plumly	2—3	210	269 33
" 15	G. B. Turner	2—3	210	268 62
May 5	" " "	1—3	105	134 32
" 6	" " "	1—4	150	191 85
" 8	Baxter & Co	3—2	285	362 48
June 19	" "			
	Carried to page 17		3, 805	4, 912 87
[13]				
1869.				
Jan. 24	Baxter & Co	3—2	285	362 24
July 22	J. S. Plumley	1—2	95	120 32
" 24	Baxter & Co	3—2	285	360 86
Aug. 27	King Bros	1—2	95	119 76
Sep. 30	Baxter & Co	4—2	380	476 90
Oct. 19	Todd & Co	4—3	420	525 84
" "	" "	2—2	190	237 88
1870.				
Feb'y 17	G. W. Cunningham	1—3	105	129 34
Mar. 6	Mordyke & Co	1—2	95	116 78
Ap'l 4	Todd & Co	2—3	210	257 11
May 14	Gallego Mills	1—4	150	186 67
June 2	" "	1—2	95	115 39
" 7	Todd & Co	3—2	285	345 95
" 13	J. L. Roberts	1—3	105	127 34
	Carried to page 17		2, 795	3, 478 38
41 [14]				
1870.				
June 20	B. E. Bailes	1—2	95	115 11
July 13	J. S. Plumley	2—2	190	229 52
Aug. 11	Todd & Co	2—3	210	252 70
" 16	E. Valentine	1—3	105	126 26
Sep. 1	Baxter & Co	3—2	285	341 28
" "	" "	3—3	315	377 95
" 12	" "	1—2	95	113 82
Oct. 5	E. Valentine	2—3	210	250 81
" 13	Baxter & Co	2—2	190	226 67
" 17	" "	2—2	190	226 54
" "	Todd & Co	2—2	190	226 54
" 27	Mordyke & Co	2—2	190	226 23
Nov. 4	Todd & Co	1—3	105	124 88
" 17	B. M. Davis	1—2	95	112 79
Dec. 1	Mordyke & Co	1—2	95	112 58
	Carried to page 17		2, 560	3, 062 68
[15]				
1870.				
Dec. 9	D. Bush	1—4	150	177 55
" 19	S. Tagget	1—3	105	124 11
" "	M. Sinclair	1—4	150	177 30
" 21	J. H. Sharp	1—3	105	124 08
1871.				
Jan'y 9	Todd & Co	2—2	190	223 95
Mar. 1	Hubard & Co	1—2	95	111 15
" "	G. A. Gamp	1—2	95	111 15
Apr. 5	McKarkle & Co	1—2	95	110 60
" "	Todd & Co	2—2	190	221 20

Statement filed with master's report—Continued.

Apr. 5	Ruble & Hight	1—2	95	110 60
" "	J. J. Cohen	1—2	95	110 60
" "	F. Stewart	1—2	95	110 60
" "	Mordyke & Co	1—2	95	110 60
	Carried to page 17		1,555	1,823 46

42 [16] *Omissions admitted by Mr. Park on review.*

1865.				
Nov. 10	W. Gardner	1—2	95	141 40
1866.				
Sep. 19	Baxter & Co	4—2	380	546 00
Oct. 20	Warden & Barnet	1—4	150	214 77
1867.				
June 21	R. Haywood & Co	1—4	150	208 73
Sep. 30	Halteman	3—3	315	433 13
Oct. 11	P. Gregg	1—3	105	144 20
" 22	Baxter & Co	1—3	105	144 01
1868.				
Sep. 25	Holmes & Blanchard	1—2	95	125 01
" 27	G. B. Turner	1—2	95	124 98
1870.				
Aug. 10	M. Kent	1—3	105	126 37
Oct. 27	Todd & Co	1—2	95	113 10
Nov. 9	Holmes & Blanchard	1—2	95	112 91
1871.				
Apr. 28	Gallego Mills	2—4	300	348 10
	Carried to page 17		2,085	2,782 71

[17]

Brought from p. 1		2,920	4,450 03
" " 2		1,925	2,887 44
" " 3		1,855	2,751 24
" " 4		2,485	3,604 89
" " 5		2,685	3,870 50
" " 6		2,810	4,016 89
" " 7		3,520	4,945 98
" " 8		3,105	4,281 16
" " 9		3,285	4,439 53
" " 10		3,980	5,291 62
" " 11		2,720	3,582 32
" " 12		3,805	4,912 87
" " 13		2,795	3,478 38
" " 14		2,560	3,063 68
" " 15		1,555	1,823 49
" " 16		2,085	2,782 71
		43,790	60,182 73
Damages up to Jan. 1st, 1875 (estimated on machines only)			60,182 73

43 [Page 22.] *Park's report.*

The following pages, including the 38th page, is a copy of Park's report of the number of machines sold and prices of same, since Nov. 29th, 1864, up to this date, to wit, the closing of the proof on damages, May 1st, 1875, before C. B. Beach, of Cleveland, as master. The footing on each page is carried forward to page 39 where a combined footing and total amount of receipts for the same is found. On page 40 is found the number of No. 2, No. 3, and No. 4 machines, and a total amount:

[23]

1865.				
Jan'y 10	Baxter & Co	6—2		360 00
Feb'y 13	" "	4—3		320 00
" 23	Lind & Bucher	1—4		200 00
Mar. 14	Holmes & Blanchard	1—3		97 50
" 20	Baxter & Co	4—2		280 00
" 28	Ja. Damp	1—2		100
Apr. 20	Todd & Co	1—2		70

Statement filed with master's report—Continued.

1865.				
Apr.	20	Todd & Co	1—3	90
May	5	F. Shoemaker	1—2	100
"	8	Holmes & Blanchard	1—3	97 50
"	23	Todd & Co	1—2	70
June	12	Baxter & Co	2—2	140
"	"	" "	2—3	180
"	"	F. Shoemaker	1—2	100
July	13	Todd & Co	2—3	180
		Carried to page 39		2,385 00
44 [24]				
1865.				
July	29	Todd & Co	1—3	90 00
Aug.	15	Baxter & Co	1—2	70 00
"	"	" "	1—3	90
"	16	" "	2—3	180
"	19	Todd & Co	1—2	70
"	19	" "	1—3	90
"	26	Baxter & Co	1—3	90
"	29	Halteman	1—2	75
Sep.	4	Todd & Co	2—2	140
"	"	" "	2—3	180
"	11	Halteman	1—2	75
"	"	"	1—3	100
"	13	Baxter & Co	1—2	70
"	"	" "	1—3	90
"	26	" "	2—3	180
		Carried to page 39		1,590 00
[25]				
Oct.	2	Baxter & Co	2—2	140 00
"	9	" "	2—2	140
"	6	Halteman	1—3	100
"	18	J. Damp	1—2	90
Nov.	27	Holmes & Blanchard	1—4	130
Dec.	17	Halteman	1—3	100
"	19	Baxter & Co	1—2	70
"	"	" "	1—3	90
1866.				
Jan.	3	" "	2—3	180
"	11	Halteman	1—3	100
"	16	"	1—2	75
Feb.	12	Baxter & Co	2—3	180
"	17	J. Laysey & Bro	1—2	100
"	20	Holmes & Blanchard	1—3	97 50
		Carried to page 39		1,612 50
45 [26]				
1866.				
Feb'y	20	Halteman	1—2	75 00
"	"	"	3—3	300
Mar.	2	Daggett, Potter & M	1—4	200
"	10	A. R. Elson	1—2	100
"	17	Todd & Co	1—3	90
"	22	" "	1—3	90
Apr.	13	Halteman	1—2	75
"	19	"	1—2	75
"	"	Todd & Co	2—2	140
"	"	" "	2—3	180
May	11	Halteman	3—3	200
June	1	"	2—2	150
"	8	Baxter & Co	1—3	90
"	29	Halteman	3—3	300
July	12	Baxter & Co	2—3	180
		Carried to page 39		2,245 00
[27]				
July	13	Todd & Co	2—2	140 00
"	21	Turner & Pettitt	1—2	100
"	27	Todd & Co	1—4	150
Aug.	2	Baxter & Co	2—3	180
"	4	Todd & Co	2—3	180
"	"	Halteman	2—2	150
"	9	Baxter & Co	2—3	180
"	15	Todd & Co	2—2	140
"	29	Baxter & Co	1—2	70

Statement filed with master's report—Continued.

1866.				
Sep.	6	Herold & Mortz	1—2	100
"	10	Halteman	3—3	300
"	"	Todd & Co	3—3	270
"	28	H. Harvey & Sons	2—3	260
"	29	Todd & Co	1—3	90
"	"	Halteman	1—3	100
		Carried to page 39		2, 410 00
46 [28]				
1866.				
Oct.	2	Baxter & Co	2—3	180 00
"	"	" "	1—2	70
"	13	Todd & Co	2—3	180
"	15	Halteman	2—3	200
"	"	H. Harvey & Sons	1—3	130
"	22	Baxter & Co	1—3	90
"	24	" "	3—2	210
"	30	Halteman	2—2	150
"	"	Todd & Co	1—2	70
Nov.	22	Baxter & Co	2—3	180
"	23	Todd & Co	2—3	180
"	"	Halteman	2—3	200
Dec.	3	"	2—2	150
"	4	Baxter & Co	4—2	280
"	12	Todd & Co	1—3	90
		Carried to page 39		2, 360 00
[29]				
1866.				
Dec.	23	Halteman	3—3	300 00
1867.				
Jan.	1	Baxter & Co	2—2	140
"	"	" "	2—3	180
Feb.	2	Todd & Co	3—2	210
Feb.	9	Baxter & Co	4—2	280
"	"	Halteman	4—3	400
Mar.	9	Allen & Co	1—4	200
"	21	D. Lind & Co	1—2	100
May	1	Barren, Dodge & Co	1—4	200
"	18	Halteman	4—3	400
"	27	Todd & Co	2—2	140
June	25	Baxter & Co	3—3	270
"	"	" "	2—2	140
July	17	Todd & Co	2—3	180
		Carried to page 39		3, 140 00
47 [30]				
1867.				
July	22	Todd & Co	3—3	270 00
"	26	Halteman	2—3	200
Aug.	13	Henry Reihl	3—3	300
"	"	Baxter & Co	3—2	210
"	17	Todd & Co	2—3	180
"	24	" "	2—3	140
Sep.	2	Baxter & Co	1—4	150
"	13	Todd & Co	2—4	300
"	17	" "	2—2	140
"	21	Baxter & Co	2—3	180
Oct.	19	" "	1—2	70
"	"	" "	1—3	90
Nov.	2	" "	1—4	150
"	8	" "	2—2	140
"	11	Todd & Co	2—2	140
		Carried to page 39		2, 660 00
[31]				
Nov.	11	Baxter & Co	2—2	140 00
Dec.	2	" "	2—2	140
"	19	" "	2—3	180

Statement filed with master's report—Continued.

1868.				
Jan. 6	Baxter & Co		3—2	210
Feb'y 21	" "		2—2	140
" "	Todd & Co		4—2	280
" "	" "		4—3	360
Mar. 4	Halteman		2—3	180
" "	Baxter & Co		2—3	180
" 30	C. W. Coe & Co		2—4	400
Apr. 17	Halteman		2—2	140
" "	"		2—3	180
" 18	Todd & Co		1—4	150
May 6	Gallego Mills		1—4	200
	Carried to page 39			2,880 00
48 [32]				
1868.				
May 13	Baxter & Co		4—2	266 00
" 26	" "		2—2	133 00
" "	" "		3—3	256 50
June 7	A. K. Halt		2—2	140 00
" 9	" " "		3—3	270
" 17	T. A. Baxter		2—2	133
July 3	J. L. Miller		1—2	100
" 9	Todd & Co		4—2	280
" "	" "		4—3	360
" "	J. H. Spaulding		1—3	100
" 31	Baxter & Co		3—3	256 50
Aug. 10	Todd & Co		4—2	280
" "	" "		4—3	360
" "	Halteman		2—2	140
" 17	Todd & Co		1—2	70
	Carried to page 39			3,145 00
[33]				
Aug. 17	Halteman		2—3	180 00
" 22	Baxter & Co		3—3	256 50
" 31	" "		2—2	133
Sep. 2	" "		3—2	199 50
" 5	Todd & Co		1—2	70
" 8	Halteman		1—3	90
" 10	Baxter & Co		1—4	150
" 17	Pritz & Weirsheimer		1—2	100
" "	Baxter & Co		3—2	199 50
" 25	S. S. Thompson		1—3	120
Oct. 3	Halteman		2—3	180
" 19	G. B. Turner		1—3	90
" "	Halteman		2—2	140
" 23	Baxter & Co		2—2	133
" "	" "		2—2	133
	Carried to page 39			2,174 50
49 [34]				
1868.				
Nov. 10	Baxter & Co		4—2	266 00
1869.				
Jan'y 8	" "		3—2	199 50
Feb'y 1	" "		5—2	332 50
" "	" "		3—3	256 50
" 6	Todd & Co		3—3	270 00
" "	" "		6—2	420
" 18	" "		3—3	270
Mar. 6	G. B. Turner		1—2	60
Apr. 5	J. S. Plumley		1—2	80
" 15	G. B. Turner		2—3	156
May 5	" "		2—3	156
" 6	" "		1—3	78
" 8	Baxter & Co		1—4	150
June 19	" "		3—2	199 50
	Carried to page 39			2,894 00
[35]				
June 24	Baxter & Co		3—2	199 50
July 22	J. S. Plumley		1—2	80
" 24	Baxter & Co		3—2	195

Statement filed with master's report—Continued.

1869.			
Aug. 27	King Bro's	1—2	100
Sep. 30	Baxter & Co	4—2	260
Oct. 19	Todd & Co	4—3	340
" "	" "	2—2	130
1870.			
Feb'y 17	G. W. Cunningham	1—3	120
Mar. 6	Mordyke & Co	1—2	66 50
Apr. 4	Todd & Co	2—3	168
May 14	Gallego Mills	1—4	180
June 2	" "	1—2	85 50
" 7	Todd & Co	3—2	285
" 13	J. L. Roberts	1—3	120
	Carried to page 39		2,329 50

50 [38] *Omissions admitted by Mr. Park on review.*

1865.			
Nov. 10	Gardner, W	1—2	100 00
1866.			
Sep. 19	Baxter & Co	4—2	280
Oct. 20	Warden & Barnett	1—4	200
1867.			
June 21	R. H. Haywood & Co	1—4	190
Sep. 30	Halteman	3—3	300
Oct. 11	P. Gregg	1—3	130
" 22	Baxter & Co	1—3	90
1868.			
Sep. 25	Holmes & Blanchard	1—2	75
" 27	G. B. Turner	1—2	60
1870.			
Aug. 10	M. Kent	1—3	120
Oct. 27	Todd & Co	1—2	66 50
Nov. 9	Holmes & Blanchard	1—2	75
1871.			
Apr. 28	Gallego Mills	2—4	360
	Carried to page 39		2,046 50
	Bro't from page 23		2,385 00
	" " " 24		1,590 00
	" " " 25		1,612 50
	" " " 26		2,245 00
	" " " 27		2,410 00
	" " " 28		2,360 00
	" " " 29		3,140 00
	" " " 30		2,660 00
	" " " 31		2,880 00
	" " " 32		3,145 00
	" " " 33		2,174 50
	" " " 34		2,894 00
	" " " 35		2,329 50
	" " " 36		1,979 50
	" " " 37		1,355 50
	" " " 38		2,046 50
	Defendants' total sales		37,207 00

51 [36]

1870.			
June 20	B. E. Bailes	1—2	76 00
July 13	J. S. Plumley	2—2	152
Aug. 11	Todd & Co	2—3	168
" 16	E. Valentine	1—3	96
Sep. 1	Baxter & Co	3—2	199 50
" "	" "	3—3	252
" 12	" "	1—2	66 50
Oct. 5	E. Valentine	2—3	192
" 13	Baxter & Co	2—2	133
" 17	Todd & Co	2—2	133
" "	Baxter & Co	2—2	133
" 27	Mordyke & Co	2—2	133
Nov. 4	Todd & Co	1—3	84
" 17	B. & M. Davis	1—2	95
Dec. 1	Mordyke & Co	1—2	66 50
	Carried to page 39		1,979 50

Statement filed with master's report—Continued.

[37]

1870.				
Dec. 9	D. Bush	1—4	200	00
" 19	Sam. Taggert	1—3	90	
" "	H. M. Sinclair	1—4	200	
" 21	J. H. Shaup	1—3	96	
1871.				
Jan. 9	Todd & Co	2—2	133	
Mar. 1	Hurburt & Wright	1—2	76	
" "	C. A. Gump & Co	1—2	76	
Apr. 5	McKorkle & Co	1—2	71	25
" "	Ruble & Hight	1—2	71	25
" "	J. J. Cohen	1—2	71	25
" "	Tonns & Stewart	1—2	71	25
" "	Todd & Co	2—2	133	
" "	Mordyke & Co	1—2	66	50
	Carried to page 39		1,355	50

52 *Number of machines.*

Number of machines included in the foregoing statements:			
No. 2	220		
No. 3	[188		
No. 4	23		
	431		
		37,207	00
Difference between cost of machines and selling-price as sold by defendants, and the estimated cost by defendants:			
No. 2, 45.00	9,900		
No. 3, 60.00	11,280		
No. 4, 100.00	2,300		
	23,480		
		23,480	00
		13,727	00

53 And afterwards, to wit, on the 23rd day of December, A. D. 1875, the exceptions of said defendants to the foregoing report were duly filed herein in said clerk's office, which are in the words and figures following, to wit:

Def'ts' ex. to report.

United States circuit court, northern district of Ohio.

JONATHAN L. BOOTH
vs.
GEORGE PARKS, G. B. TURNER, WILLIAM A. Taylor, and James A. Vaughn.

The respondents hereby except to the report of the master filed in this case in pursuance of the decree of this honorable court, for the following reasons, viz:

1. They except to the allowance by the master of the sum of six hundred and twenty-seven $\frac{20}{100}$ dollars as damages to the complainant, for the reason that the said complainant, in his bill of complaint filed in said suit, has not prayed any damages to be awarded to him, but only that the said defendants might be decreed to account for and pay over to him

54 the profits of which the defendants had deprived him by the infringement of said patent, and by the use, manufacture, and sale of said improved grain separators, and that said defendant is not entitled to any other or further remedy than he has prayed for in his said bill of complaint.

2. That the items allowed by the master as damages are not such as are by law recoverable as damages, and especially to the item of counsel fees, which are not recoverable.

3. That the amount of damages awarded by the master is excessive.

4. The respondents further except to the allowance to the complainant of the sum of four hundred and twenty dollars, in addition to the several amounts awarded as damages and as profits, the same being allowed as a "compensation" to the complainant "for the time he has spent in the prosecution of this action." Respondents claim that complainant is not entitled to recover any money compensation for his time in a suit for infringement of letters patent.

5. That the amount allowed by the master to the complainant as compensation for his time is excessive.

6. That there is no sufficient proof of the amount of time expended by complainant in the prosecution of this suit, nor of the value of his time.

7. Because the master has taken no account of the time of respondents expended in the manufacture and sale of infringing machines, nor of interest on the capital employed in the business, all of which should have been enquired into and proper allowance made to the respondents therefor.

8. Because the master has made no allowance to the respond-
55 ents for expenses of advertising and other necessary expenses of introducing their machines into the market, to which allowance they are especially entitled in this case in view of the admitted fact that the complainant has neither manufactured nor sold his patented machines, nor made any effort to introduce them into the market, since the date of the reissue of his patent.

9. Respondents further except to the master's report, because the amount of profits awarded to the complainant is excessive, & further,

10. Because the master awarded to complainant the whole amount of profits alleged to have been received by the respondents from the manufacture and sale of infringing machines, there being no proof and no presumption that the complainant would have received any such amount of profits in case the respondents had not manufactured and sold such machines.

11. Because the machine manufactured and sold by respondents was manufactured under a letters patent of the United States granted to one of said respondents, and is materially different in construction from that described in complainant's patent, and is admitted by complainant in his testimony in this suit to be much more economical in construction, less complicated, and more practically applicable to such use.

12. Because from the proofs in the case and complainant's own statement the profits made by himself on the machines manufactured by him was only an average of seven $\frac{14}{100}$ dollars for each machine, and that he is not entitled to recover more profits than he himself made in
56 the manufacture and sale of his own machines.

13. Because the master has allowed to complainant profits on the entire machine instead of confining the amount awarded to a portion of the total amount of profits due to the features of novelty embraced in the patented machine.

14. Because the master should have confined the award of profits to the advantage derived from the patented improvement, exclusive of the profits of manufacture, and exclusive also of the profits of making the old machine known and used prior to the complainants' alleged inven-

tion. The profits or damages as the case may be, must be limited to the value of the improvements only.

15. Because as appears from complainant's own testimony the only invention covered by his patent is the direction in which the screens are shaken and not otherwise in the construction of the machine itself.

16. Because the only advantage derived by the respondents in the construction of their machine from the invention patented to complainant is a slight economy in construction, amounting to about one dollar on each machine.

17. Because it appears from the evidence that respondents were free to manufacture and sell machines exactly similar in construction to those manufactured by them, provided the riddles had be' operated with an end shake instead of a side shake, and that therefore they are only chargeable with the profit derived by them from such slight change of construction.

57 18. Because it appears from the evidence that there is no advantage in the operation or use of the machines from the employment of the side-shake over the end-shake, and that therefore the measure of profits is the saving of one dollar on each machine in their construction.

Respondents therefore pray this honorable court to set aside the master's report as filed, and that the same be referred back at the costs of the complainant, to the end that another report may be made by the master conformable to law and the principles of equity.

W. BAKEWELL,
Counsel for Respondents.

Cont'd.

And afterward, to wit, at the October term of said court, to wit, on the 29th day of December, A. D. 1875, this cause is continued to the next term of this court.

And afterward, to wit, on the 3d day of January, A. D. 1876, came the complainant by his solicitors, and filed in the clerk's office of said court his exceptions to said report, which exceptions are in the words and figures following, to wit:

Compl't's exceptions.

United States circuit court, northern district of Ohio.

JONATHAN L. BOOTH
vs.
GEORGE PARKS ET AL.

The complainant in the above action hereby excepts to the re-
58 port of the master filed herein as follows:

1st. He excepts to the master's refusal to allow him as damages on the machines wrongfully sold by the defendants at the rate of profit that the complainant made on such machines made and sold by him, being ninety-five, one hundred and five, and one hundred and fifty dollars respectively.

2d. In that the damages allowed by the master are less than he was by law bound to allow.

3d. In that the said master allowed to the defendants the sum of two

thousand one hundred and one dollars moneys collected by the complainant from various parties using such infringing machines.

4th. In that the master refused to allow interest on the profits reported by him.

WILLEY, TERRELL & SHERMAN,
Att'ys for Compl't.

Cont'd.

And afterward, to wit, at the January term of said court, A. D. 1876, this cause is continued to the next term of this court.

Hearing on exceptions commenced.

And afterward, to wit, at the April term of said court, to wit, on the 23d day of May, A. D. 1876, this cause came on to be heard upon the exceptions filed herein by complainants and defendants to the report of the master filed in this cause. Whereupon the arguments of counsel were commenced, but were not concluded. And thereupon the further hearing of this cause is adjourned until to-morrow morning.

59 *Taken under advis't, &c.*

And afterward, to wit, at said April term of said court, to wit, on the 24th day of May, A. D. 1876, came again the parties by their solicitors, and thereupon the arguments of counsel being concluded this cause is taken under advisement by the court upon said exceptions.

Cont'd.

And afterward, to wit, at the April term of said court, A. D. 1876, this cause is continued to the next term of this court.

Ex. overruled save as to 4th ex. of def'ts.

And afterward, to wit, at the October term of said court, to wit, on the 9th day of December, A. D. 1876, this cause having been heretofore heard and taken under advisement by the court upon the several exceptions of the said complainant and the said defendants to the master's report hereinbefore filed, and the court being duly advised in the premises, upon consideration thereof it is ordered that said several exceptions be, and the same are hereby in all respects overruled, except that the said defendants' fourth exception, which relates to the allowance by said master's report of four hundred and twenty dollars to said complainant as compensation for time occupied in the prosecution of this suit, is hereby sustained.

Final decree.

And afterward, to wit, at the said October term of said court, to wit, on the 15th day of December, A. D. 1876, this cause came on for further hearing, and it appearing that the court at its present term
60 has overruled all the exceptions to the master's report filed either by complainant or defendants, except the fourth exception of defendants, it is ordered and decreed that the said master's report be in all respects confirmed except as to the item or amount referred to in said

fourth exception, and it is therefore found that the complainant is entitled to receive of the respondents the sum of $10,571.29, for and on account of the profits made by them as found by said master, and on account of expenses incurred, with interest thereon from the date of the filing of said report, to wit, November 24th, 1875, to the first day of this term, making in all the sum of $11,184.42.

Whereupon it is ordered, adjudged, and decreed that the complainant recover of said defendants the sum of $11,184.42, and that the said defendants pay the same, with interest thereon from the first day of this term, to the said complainant, with the costs herein, within thirty days, or that execution issue to collect the same as on judgments at law.

Appeal.

And thereupon came said defendants, by their solicitors, and gave notice of their intention to appeal this cause to the Supreme Court of the United States, which appeal is hereby allowed, and bond therefor is fixed in the sum of $15,000.

61 In U. S. circuit court.

JONATHAN L. BOOTH
versus
TURNER, PARKS & Co.

It is hereby agreed that, with the consent of said court, a rule may be granted on the complainant to show cause why the final decree in this case should not be amended in accordance with the annexed petition of the defendants. Rule returnable on July 15th, 1877.

Cleveland, June 30th, 1877.

WILLEY, TERRELL & SHERMAN,
Sol'rs for Compl't.

And now, to wit, June 30th, 1877, in accordance with the stipulation of parties, a rule is hereby granted on the complainant to show cause why the decree in this case should not be amended in accordance with the petition of the defendant this day filed. Rule returnable on July 15th, 1877.

62 JONATHAN L. BOOTH
vs.
TURNER, PARKS & Co.

To the honorable the judges of the circuit court of the United States for the northern district of Ohio:

The above-named defendants respectfully represent to your honors that since the statement made by them to the master appointed under the decree of this court "to ascertain & take & state and report to this court an account of the gains, profits, and advantages which the defendants have received, or which have arisen or accrued to them since the 29th of November, 1864, from infringing the said exclusive rights of said complainant by the manufacture, use, and sale of the said improvements patented in said reissued letters patent, and also what damages in addition thereto the complainant has sustained by reason of said infringement;" and since the coming in and confirmation by this court of

the master's report (excepting as to the fourth exception of defendants thereto), the said defendants have discovered that, in making out their statement to the master of the number & description of machines manufactured and sold by them, and of the parties to whom the same were sold, and the price received therefor, one machine sold by them was accidentally and unintentionally omitted by them; that the said machine was a No. 4 separator, and was sold by the personal efforts of said defendants to R. H. Heywood, of Venice, in the State of Ohio, on the 16th day of July, A. D. 1867, for the sum of one hundred & ninety dollars ($190); that the amount of profits reported by said master as due
63 to said complainant on machines sold by them, by the personal efforts of the defendants themselves, is twenty-five per centum of the price thereof, the average price of said No. 4 machines being stated in said master's report to be one hundred & ninety-two dollars, and that the profits accruing to said complainant on said machines would be the sum of forty-eight dollars ($48).

The said defendants, therefore, pray your honors to make an order nunc pro tunc as of the 15th December, 1876, the date of the final decree in this case, directing that the said sum of forty-eight dollars, together with interest thereon from the 24th November, 1875, until the first day of the term at which said decree was made, to wit, the third day of October, 1876, be added to the amount of said decree, without prejudice to the appeal taken by said defendants from the final decree of this court to the Supreme Court of the United States.

GEO. PARKS.

NORTHERN DISTRICT OF OHIO,
City of Cleveland:

Before me, an United States commissioner, personally came George Parks, one of the above-named defendants, who, being duly sworn, deposes and says that the facts set forth in the foregoing statement & petition are true, to the best of his knowledge, information, & belief.

CHAS. H. BILL,
U. S. Com'r N. D. O.

64 (Indorsed:) 2249. Jonathan L. Booth vs. Turner, Parks & Co. Petition of defendants to amend decree.

And now, the within petition being presented, on consideration thereof, the final decree in this case is amended, nunc pro tunc, as of December 15, 1876, by adding the sum of $51.53 to the amount for which said decree is entered, without prejudice to the appeal to the Supreme Court taken by the defendants therefrom.

Copy filed June 30th, '77.

CHAS. H. BILL,
Dep. Clk.

65 THE UNITED STATES OF AMERICA,
Northern District of Ohio, ss:

At a stated term of the April court of the United States within and for the northern district of Ohio, begun and held at the city of Cleveland in said district on the first Tuesday in April, being the 3rd day of said month, in the year of our Lord one thousand eight hundred and 77, and of the Independence of the United States of America the 101st, present, the honorable Martin Welker, district judge, among the proceedings then and there had were the following, to wit:

JONATHAN L. BOOTH
v.
GEORGE PARKS ET AL. } 2249. Chancery.

TUESDAY, *Sept. 18th.*

And now the within petition being presented, on consideration thereof the final decree in this case is amended nunc pro tunc as of December 15th, 1876, by adding the sum of $51.53 to the amount for which said decree is entered, without prejudice to the appeal to the Supreme Court taken by the defendants therefrom.

66 Circuit court of the United States, northern district of Ohio.

JONATHAN L. BOOTH
v.
GEORGE PARKS ET AL. } In chancery.

It is hereby stipulated that the testimony in this case shall be exclusively in writing and filed, and that the complainant shall take and file his testimony by the 1st of December, 1871; the defendants their testimony by the 1st February, 1872, and all rebutting or further testimony by either party to be taken and filed by the 15th of March, 1872. Testimony to be taken by either party on six days' notice to the other party, except that depositions may be taken on the 16th day of November, 1871, at Rochester, N. Y., on four days' notice, and before any officer authorized to take depositions, waiving all outside proof of his official character.

WILLEY, CARY & TERRILL,
Solicitors for Complainant.
WILLIAM BAKEWELL,
Solicitor for Defendants.

Copy.

67 Circuit court of the United States, northern district of Ohio.

J. L. BOOTH, COMPLAINANT,
vs.
PARKS ET AL., DEFENDANTS. } In chancery.

Depositions will be taken by the complainant in this cause at No. 81 Powers Block, in the city of Rochester, State of New York, before William H. Shipherd, or other competent authority, on the 16th November instant, at 10 a. m., to continue from day to day until completed.

WILLEY, CARY & TERRILL,
Sol'rs for Compl't.

To W. BAKEWELL, Esq.,
Sol'r for Def'ts.

PITTSBURGH, *Nov. 11th*, 1871.

Received copy of this notice.

W. BAKEWELL,
Sol'r for Def'ts.

68 In the circuit court of the United States for the northern district of Ohio.

JONATHAN L. BOOTH, COMPLAINANT,
vs.
GEORGE PARKS ET AL., DEFENDANTS. } In chancery.

Depositions of witnesses on behalf of the complainant in this action taken before William H. Sheppard (a notary public duly appointed for the county of Monroe in the State of New York), pursuant to the annexed stipulation and notice, at No. 81 Powers Block, in the city of Rochester and State last aforesaid, on the 16th day of November, 1871.

Mr. W. F. Cogswell appearing for the complainant, and Mr. G. H. Christy for the defendants.

JONATHAN L. BOOTH, being carefully examined and cautioned, and duly sworn to testify the whole truth and nothing but the truth, saith:

I am forty eight years of age. I am the complainant in this action. I reside at Rochester, New York.

The counsel for the complainant shows the witness certified copy of reissued letters patent dated the 29th day of November, 1864, to Jonathan L. Booth, which copy is by me marked Plaintiff's Exhibit A, and asks—

Int. 1. Q. Are you the patentee named in those letters patent?

A. I am.

69 The certified copy letters patent so marked were now offered in evidence.

Int. 2. Q. Are you familiarly acquainted with the specifications and drawings attached to the letters patent which have been shown you?

A. I am.

The complainant's counsel now shows the complainant, witness, a model marked by me Plaintiff's Exhibit B, and asks:

Int. 3. Q. State whether the model now shown you is a correct representation of the machine or device described in the specifications and illustrated in the drawings attached to the certified copy of the letters patent marked Plaintiff's Exhibit A.

A. It is.

The model so shown the witness & so marked was now by the counsel for complainant offered in evidence.

Int. 4. Q. Where did you reside at the time of making the invention described in the letters patent already introduced in evidence?

A. In New York City.

Int. 5. Q. State whether machines constructed according to the specifications attached to such letters patent went into use, and when first, and where, and how extensively?

A. They did go into use; first in a flour-mill, practically, June 1st, in the year eighteen hundred and fifty-nine, at Rochester, New York, in the mill called the Crescent Mills. Some half dozen machines made precisely like this went into use right away.

Int. 6. Q. Do you know the defendants in this action?

A. I do.

70 Int. 7. Q. Where do they reside or do business?

A. At Cuyahoga Falls, in the State of Ohio.

Int. 8. Q. What is the business carried on by them at that place?

A. They manufacture grain-cleaning machinery.

Int. 9. Q. Have you been at their works?

A. I have.

Int. 10. Q. Do you know whether they do, and have for some years past, manufactured and sold a grain separator?

A. I do.

Int. 11. Q. State whether they manufacture and sell such apparatus?

A. They do, or have; I can't say whether they are doing it to-day or not.

The plaintiff is now shown by me a model marked by me Plaintiff's Exhibit C, and is asked:

Int. 12. Q. State whether the model now shown you is a correct representation of the machine manufactured and sold by the defendants.

(Objected to as leading.)

A. It is.

The model so shown the witness, and so marked, is now offered in evidence by the counsel for the complainant.

Int. 13. Q. Where have you seen machines manufactured by the defendants of which the model, Plaintiff's Exhibit C, just shown you is a representation?

(Objected to; the witness not having yet testified that he ever saw such machines.)

71 A. I have seen them in many places; at their works in Cuyahoga Falls, in Ohio; in flour mills in Chicago, in Illinois; and in Milwaukee, in Wisconsin, and on sale in the houses of their agents at Chicago, at the house of T. W. Baxter, and at St. Louis, at the house of A. K. Halteman.

Int. 14. Q. Were the gentlemen you have named the defendants' agents at those respective places?

A. They were.

Int. 15. Q. What has been your occupation in life?

A. I might be called a mechanical inventor, I suppose.

Int. 16. Q. Have you also been a practical mechanic?

A. Indirectly so; not professionally.

Int. 17. Q. State whether you have studied mechanical principles and their application in different kinds of mechanism; and if so, for what length of time?

A. I have for the past twenty-five years.

Int. 18. Q. If you have devoted your attention to any special department of mechanics, state what.

A. I have devoted more time to the construction and mechanism of grain separators than any other during the past twenty-five years.

Int. 19. Q. What is the principal object or purpose sought to be accomplished in the machine described in your letters patent, Exhibit A?

A. To separate oats from wheat without waste.

Int. 20. Q. State whether the presence of oats in wheat brought to market is more common in some sections of our country than others; and if so, in what?

72 A. In wheat grown in the Western States generally there is found more oats than from wheat grown in this part of the country.

The counsel for the complainant now shows the witness plaintiff's Exhibit C, and asks?

Int. 21. Q. Have you examined that model in connection with the specification attached to your letters patent, Exhibit A?

A. I have.

Int. 22. Q. State whether, in your opinion, a machine constructed

after that model would embody substantially the same mechanical principles as described in the specifications and drawings attached to your letters patent?

A. It does involve the same.

Int. 23. Q. State what parts described in the specifications of your letters patent are in your opinion to be found in the model, Exhibit C.

A. The arrangement of the zig-zag seives and boxes with the lateral shake motion, and also the series of zig-zag seives with the lateral shake motion in combination with the fan and vertical spout, are the same.

Int. 24. Q. State whether the location of the fan-box, fan, and vertical spout with reference to the series of zig-zag screens is the same in the model, plaintiff's Exhibit C, as in the specifications annexed to your letters patent, Exhibit A, or different; and if different, state in what that difference consists.

A. The effective relation I consider the same. The position of the fan and spout in relation to the zig-zag seives and boxes is different; the vertical spout coming up at the end of the machine, while in
73 Exhibit A it comes up at the side.

Int. 25. Q. Does that change in position produce any different result, in your opinion?

A. It does not.

Int. 26. Q. State whether it produces the result in any different manner.

A. It produces some different results. It deposits the light substances blown out of the vertical spout in a different place or point relatively to the zig-zag seives than it does in the other case. The machine in Exhibit A deposits the impurities blown out of the vertical spout at the side of the machine, while in the other they are deposited at the end.

Int. 27. Q. State whether, in your opinion, there is any difference either in the result produced or in the mode of producing it in the two machines other than you have described.

A. There is.

Int. 28. Q. State what.

A. The oats, in Exhibit C, are discharged at one end of the machine, while in Exhibit A they are discharged at both ends. I see no other difference in the results.

Int. 29. Q. State whether these differences are substantial or formal, in your opinion.

A. I consider the differences only formal.

Being cross-examined by defendants' counsel:

Cross-int. 1. Q. Who made the models, Exhibits B & C?

A. The models were made by A. K. Halteman, of St. Louis.

Cross-int. 2. Q. When and for what purpose, if you know?

74 A. They were made last spring some time, at my request, in anticipation of this trial.

Cross-int. 3. Q. Is he a model-maker by occupation?

A. I cannot say that he is professionally a model-maker. He is a manufacturer of mill machinery.

Cross-int. 4. Q. When did you move to New York City?

A. About 1856, as near as I can remember.

Cross-int. 5. Q. How long had you been there before you made the invention described in Exhibit A?

A. About a year before I commenced my experiments.

Cross-int. 6. Q. How long did your experimenting continue before the invention was complete?

A. From six months to a year, as near as I can remember.

Cross-int. 7. Q. Have you no means of ascertaining these dates more exactly?

A. I may have, and will find them if I can.

Cross-int. 8. Q. After moving to New York in 1856, as you think, when did you next visit Ohio?

A. I visited Ohio in the spring of 1859. I think that was the first visit after moving to New York. I may have visited my father before that at Cuyahoga Falls. I think I did. I only thing so from my habit of seeing my father once a year.

Cross-int. 9. Q. In your answer to interrogatory 5, you say your first machine went into use in the Crescent Mills; that some half a dozen machines made like Exhibit B went into use right away. Please state where each such machine was put into use, and when.

75 A. One more machine was put into the Crescent Mills, Rochester, New York, making two; both put in at the same time, June 1st, 1859. Four more machines, I think, two or four, were put into use at the Frontier Mills, Black Rock, New York, which were started September 15, 1859. One, if not two machines, were put into use at Hecker's Mills, called Metropolitan Mills, in New York City about that time; I cannot name the street the mills are on.

Cross-int. 10. Q. Are these all the machines you have made like Exhibit B?

A. They are.

Cross-int. 11. Q. Have you made since 1859, or during that year, other grain cleaning machines than those above enumerated; and, if so, how did they vary in construction from Exhibit B?

A. I have made some fifty or a hundred other machines since 1859, and about the year 1860 & 1861, which were different from Exhibit B.

Cross-int. 12. Q. How did they differ?

A. They differed by being made very near like Exhibit C. The only difference between them and Exhibit C was that the oats were received from the series of *seives* into a shaking trough or chute, which deposited the oats at the reverse end or near the reverse end to the place of deposit of oats in Exhibit C. The cockle seeds and such foreign matter as passes through a cockle-*seive* were also deposited at nearly the same point. The shake motion of the *seives* was obtained by a belt from the draw-shaft on the machine, running over an intermediate pulley,

76 which ran the pulley by the friction obtained from the bearing thereon of the under side of the belt running from the drive-shaft to the fan.

Cross-int. 13. Q. When did you introduce these changes?

A. One design of the machine described was effected by draft at the same time that the other was.

Cross int. 14. Q. When did you first make a machine such as you described in your answer to cross-interrogatory 12 as being very near like Exhibit C?

A. That was made in August, September, or October, 1859.

Adjourned to 9½ a. m., Friday, Nov. 17th, at the same place.

WM. H. SHEPARD,
Notary Public.

FRIDAY, *Nov. 17th*—9½ a. m.

Parties and counsel met pursuant to adjournment, and cross-examination of Mr. Booth was continued, as follows:

Cross-int. 16. Q. Can you give any of the dates refer'ed to in your

cross examination of yesterday more accurately than you have already done?

A. I find that notwithstanding I left Cuyohaga Falls in 1856 I did not reach New York until the spring of 1857. I commenced my experiments on the machine in the fall of 1858, and worked at it all winter, and on till I went to Ohio in the spring of 1859.

Cross-int. 17. Q. Where and by whom were your first machines made?

A. The first full-sized practical machine was made at Cuyohaga
77 Falls, Ohio, by L. Hatfield, at his shop there. The other machines heretofore mentioned as first made by me were made at Rochester, New York, at the shop of Joseph Hall.

Cross-int. 18. Q. When did you, either alone or in partnership with others, commence the manufacture of grain-separators at shops owned or controlled by yourselves?

A. I never did make any machines at shops owned or controlled by myself. I always hired my machines made.

Cross-int. 19. Q. How long did you continue to get machines made at Joseph Hall's shops?

A. Into the fall and fore part of the winter of 1859, as near as I can remember.

Cross-int. 20. Q. Where did you get them made next?

A. They were made next on Brown's Race, Rochester, New York, at the shops of Benton & Gatens.

Cross int. 21. Q. How long did you patronize them, and whom next?

A. I think they manufactured machines more or less for about a year; perhaps a little more; perhaps two years; I can't remember exactly; they made fifty or a hundred machines spoken of by me in my former answers. No other parties have manufactured for me since, that I now think of.

Cross-int. 22. Q. Where was the first machine used which you say was made by you very near like Exhibit C, and when was it put into use?

A. The first machine was made in the shops of Joseph Hall somewhere between the first of June, 1859, and the fall of that year. I can't tell exactly. It was tested there. Wheat was run through it. It
78 was taken from there to Chicago and exhibited in the basement of the Board of Trade buildings, somewhere about the 1st of January, 1860, and I think it was sold to Nichols & Britts, of Milwaukee, for their flour mill.

Cross-int. 23. Q. When and where did you first see one of defendants' machines such as is represented in Exhibit C?

A. It must have been about the 20th of September, 1859, at the works of Turner, Parks & Co., Cuyahoga Falls, Ohio.

Cross int. 24. Q. How do you fix that date?

A. I fix the date from my memorandum giving the time that my machines at the Frontier Mills at Black Rock were started, being present when they were started and going from there directly to Cuyahoga Falls, Ohio, and on my arrival I heard that Turner, Parks & Company were exhibiting a machine partly done, which was said to be like mine. I went directly to their works and asked if I could see the machine. My memorandum shows that the machines were started at the Frontier Mills on the 15th of September, 1859.

Cross-int. 25. Q. Examine the circular now shown to you, containing among other things a cut of your grain separator, constructed substantially as shown in Exhibit B. Is this a copy of a circular issued by you at or about the time it bears date, December, 1859?

A. It is.

79 Cross int. 26. Q. State why, after making half a dozen machines, more or less, as you have testified, like Exhibit B, with the fan and fan-box running lengthwise of the machine and the spout up the side, why you then adopted and afterwards used the construction shown in Exhibit C, viz, with the fan and fan-box crosswise of the machine and the spout up the end. Why did you make these changes?

A. The first application I had for a practical-sized machine like Exhibit B was from G. W. Burbank, proprietor of the Crescent Mills, Rochester, New York, a mill of some nine run of stone of very large capacity. He required separators of very large capacity, and the only practical mode of enlarging the capacity of the machine, being confined and restricted to certain heights between the floor and the ceiling of the mill or point from which we had to take the grain into the hopper of this machine, it was necessary to construct the machine with the series of zig-zag *seives* arranged relatively to the fan and spout as shown in Exhibit B. For if we were obliged to use the same length of *seives* and obtain the same capacity arranged the other way as in Exhibit C, we would have to make the machine too high for its practical application to the confined limits of said flour mill or other large mills. This is further explained in this way. The cockle-*seive* which conducts the grain from the last *seive* of the series would have to be the full length of the *seives* and elevated to a proper pitch to allow

80 the grain to run from it to the spout for final separation. In smaller mills, where the requirements of the machines were materially lessened, the arrangement as in Exhibit C is much more economical in its construction; less complicated and more practically applicable to such use, there being usually sufficient heighth found in such mills for its introduction.

Cross-int. 27. Q. State the length, width, and heighth of that machine and the number of *seives*; I mean the one you first put up in the Crescent Mills.

A. The *seives* were six feet in length, lengthwise of the machine, and six in number, beside the cockle-*seive*. I cannot state the exact heighth of the machine, but between five and six feet, as near as I can judge, from the bottom of the machine to the board or floor on the top, exclusive of the hopper. The *seives* were in the neighborhood of eighteen or nineteen inches in width as near as I can remember. The width of the perforations was still less, part of the *seives* being blank or smooth surface.

Cross-int. 28. Q. Give the dimensions of the largest machine you ever built with the fan-box and fan running crosswise of the machine, and state what mill it was used in?

A. The *seives* were four feet in length; they were built in lots. I cannot give the name of any mill where any of those largest ma-

81 chines were used. They were sold principally by my agent in Chicago. The *seives* were six in number besides the cockle-*seive*, built in the same manner, size, form, and pitch as shown in the series of *seives* in my description of Exhibit B, first put up in the Crescent Mills. The heighth was about or near five feet, as near as I can remember, and the width of the *seives* were about eighteen or nineteen inches.

J. L. BOOTH.

Being re-examined by the counsel for the complainant:

Int. 30. Q. Have the defendants manufactured and sold machines

like the model Exhibit C since the year 1864; and if so, down to what time?

A. They have manufactured and sold such machines from that time down to the present, or down to this spring.

Being cross-examined by counsel for the defendants:

Cross-int. 29. Q. What is the latest date of the manufacture or sale by you of a grain separator like Exhibit C?

(Objected to by complainant's counsel as immaterial.)

A. In 1861 or 1862, as near as I can remember now about it.

J. L. BOOTH.

82 The testimony of Rufus F. Osgood, taken on the 16th November, 1871, at the same place, during the suspension of the taking of the testimony of the witness Booth.

WM. H. SHEPARD,
Notary Public.

RUFUS F. OSGOOD, being carefully examined and cautioned and duly sworn to testify the whole truth and nothing but the truth, saith:

Int. 1. Q. Where do you reside and what is your age and occupation?

A. I am a patent agent, or attorney. I reside in Rochester, and am thirty-nine years of age.

Int. 2. Q. Have you made the subject of mechanics and mechanical principles a study, and if so, for how long?

A. I have for the past fifteen years.

Int. 3. Q. State whether your occupation has led you to the investigation of mechanical principles as applied in different kinds of mechanism, and if so, for what length of time?

A. It has, for the past fifteen years.

The counsel for the complainant shows the witness the Plaintiff's Exhibit A and asks:

Int. 4. Q. Have you examined and are you acquainted with the specifications and the drawings attached to the letters patent which are now shown you?

83 A. I have, and am acquainted with them.

Int. 5. Q. State whether a person having ordinary acquaintance with the mechanic arts could construct a machine from the specifications and drawings attached to plaintiff's Exhibit A.

(Objected to, the insufficiency of the specifications and drawings not having been set up as one of the defenses in the defendants' answer.)

A. I think he could.

The counsel for the complainant now shows the witness plaintiff's Exhibit B and asks:

Int. 6. Q. Have you seen this model before, and if so, have you compared it with the specifications and drawings in Exhibit A?

A. I have.

Int. 7. Q. State whether the model Exhibit B is a correct representation of the device described in the specifications and drawings attached to Exhibit A.

(Objected to as leading.)

A. I should say it is.

The counsel for the complainant now shows the witness plaintiff's Exhibit C and asks:

Int. 8 Q. Have you seen this model before and have you examined the same?

A. I have.

Int. 9. Q. State whether, in your opinion, a machine constructed
84 according to plaintiff's Exhibit C would embody substantially the same mechanical principles and be substantially the same device as that described in the specifications and drawings of plaintiff's Exhibit A?

(Objected to as containing matter which more properly belongs to the answer of the witness than to an interrogatory.)

A. In my opinion the same principle is involved.

Int. 10. Q. State your reasons for that opinion, and particularly state what parts described in the specifications and drawings of Exhibit A you find in the model Exhibit C, and the method of their operation.

A. The reason is that the same arrangement of zig-zag screens and boxes is used in Exhibit C as is described in the specifications and drawings of Exhibit A, and said series of zig-zag screens and boxes receives the lateral shake at right angles to the passage of the grain which is described in the specifications and drawings of Exhibit A, and furthermore, in Exhibit C this series of screens and boxes having the lateral shake is combined with a fan case and trunk in the same manner as described in Exhibit A.

Int. 11. Q. State whether, in your opinion, the zig zag screens and boxes in Exhibit C are the same as those described in the specifi-
85 cations and drawings of Exhibit A.

(Objected to as leading and as especially improper in form as a question to be put to an expert.)

A. I think they are the same.

Int. 12. Q. State whether you find in Exhibit C a fan and fan box communicating with a spout or passage, and if so, describe it.

A. I do. The fan-box is located at the bottom of the machine; the spout extends up vertically and a communication seems to be established between the lower screen or board and the vertical spout.

Int. 13. Q. State whether there is a fan, fan-box, and spout described in the specifications of Exhibit A, and whether they are shown in the model Exhibit B.

A. Those parts are described and shown in Exhibit A and are shown in Exhibit B.

Int. 14. Q. State whether there is a difference in the location or operation of the fan, fan-box and spout in the two devices shown in Exhibit A and C, and if so, state what it is.

A. The location seems to be different, that in Exhibit A being upon the side opposite the faces of the screens, while in Exhibit C it seems to be at the end of the screens. The operation, I think, would be
86 the same. The trunk would serve simply to receive the grain after it has passed the screens, and the fan to remove the impurities and allow the clean grain to pass out at the bottom of the fan case.

Int. 15. Q. State what is the operation of the zigzag screens and boxes in connection with the fan and spout as described in Exhibit A.

A. As I understand it, the screens and boxes remove oats and allow the grain and smaller impurities to pass, while the fan-case fan and trunk receive the grain and remove the smaller and lighter impurities.

Int. 16. Q. How does that operation compare with the operation of similar parts in Exhibit C?

A. I should say it was the same.

Being cross-examined by counsel for defendants:

Cross-int. 1. Q. Are you a practical mechanic?

A. I am not.

Cross-int. 2. Q. Did you ever have any practical experience in building or operating grain separators?

A. I have not.

Cross-int. 3. Q. How long has it been since you first commenced giving testimony as an expert in suits for infringements of letters patent?

A. I have not made that a regular business, but have acted in
87 that capacity for two years, more or less, I think, at intervals.

Cross-int. 4. Q. Did you ever make mechanics and mechanical principles a special study, except in connection with your profession as patent agent?

A. Not very specially; although I always had great interest in that subject.

Cross-int. 5. Q. Examine the claims of complainant's patent, Exhibit A, and state specifically what, in your opinion, are the essential elements of the complainant's invention as therein set forth.

A. In the first claim I should say that the novelty was the zigzag screens and the boxes when they have a shake motion at right angles to the passage of the grain, covering those screens and boxes only when such shake motion is given, in contradistinction to any other motion. In the second claim I should say the novelty was in those zigzag screens and boxes having such lateral shake motion at right angles to the passage of the grain when combined with the fan and spout, in contradistinction to any other than the lateral shake motion.

Cross-int. 6. Q. Is any particular number of screens and boxes, in your opinion, an essential element?

A. I should say it would require more than one.

88 Cross-int. 7. Q. Two such screens and boxes, I mean such as are described in Exhibit A, would then come within the purview or scope of complainant's invention as claimed in Exhibit A?

A. I should doubt whether it would.

Cross-int. 8. Q. Why not?

A. In the specifications mention is made of the use of a series of zigzag screens instead of a single set. My doubt in regard to it would be as to what is the distinction between the term "set" and the term "series," whether the term "set" means a single screen and box or a pair of each.

Cross-int. 9. Q. Would you or not consider that two constituted a series?

A. I should hardly regard it so in the sense the word is used in this specification.

Cross-int. 10 Q. How is it in the ordinary use of the term?

A. I cannot say positively, but I think that a series would require more than two.

Cross-int. 11. Q. Would two and four, with two as a multiplier, constitute a geometrical series?

A. I cannot say.

Cross-int. 12. Q. Would there be any difference except in degree between the operation of two screens and boxes and the operation of three screens and boxes, supposing the construction to be in both cases
89 in all other respects as described in Exhibit A?

A. I think there would.

Cross int. 13 Q. State what the difference would be.

A. In order to clean oats from grain it would be necessary to carry the mass over a given degree of surface in order to make the separation,

and it would be better to pass it over short lengths than long ones, and the greater number of lengths used the better it is until the separation complete. Two lengths would not be sufficient for the work, nor even three, in my opinion.

Cross-int. 14. Q. As I understand you, then, the difference of operation between such a machine having two such screens and boxes and one having three such screens and boxes would be that in the latter the grain would be more perfectly cleaned than in the former?

A. I think that would be the effect.

Cross int. 15. Q. Would there be any other material effect that you know of?

A. I cannot say as there would. In the one case I should regard the operation as incomplete, and therefore not effective for the purpose designed, that is, the separation of oats from grain; and in the other case I should regard it as complete with a suitable number in the series, but I think it would require more than three screens and boxes in
90 the series to make the operation complete.

Cross-int. 16. Q. Would a machine having three screens and boxes, and otherwise constructed as in Exhibit A, be in your opinion within the purview and scope of the claims of Exhibit A?

A. I think it would.

Cross int. 17. Q. I understand you to say in your examination-in-chief that the arrangement of the fan-case and fan crossways of the machine instead of lengthwise, and the arrangement of the spout up the end of the machine instead of up the side, does not constitute a substantial or material variation from complainant's patent; am I right?

A. That is what I meant. It may have additional functions that I do not know of, but in my view it has the effect mentioned in the complainants' patent of receiving the grain from the screens or board under the screens and blowing out the impurities. That, I understand, is the feature of novelty so far as the trunk and fan are concerned, in the complainant's patent.

Cross int. 18. Q. Suppose the shaking devices in Exhibit B instead of being connected with the end of the screens were connected with the side or edge so as to shake them in the direction of the travel of the grain, would such a machine be within the scope of complainant's invention?

A. I do not think it would. I think that patent is confined to a shake which is at right angles to the passage of the grain.

Cross-int. 19. Q. I understand you then that the direction of the shake is a material element in complainant's patent?

91 A. Yes, sir.

Cross int. 20. Q. I notice that the drawings of Exhibit A have the signature of J. Fraser and Company, attorneys. Were you, when the papers for that reissue were prepared, in any way connected with that firm?

A. I was one of the partners of that firm at that time.

RUFUS T. OSGOOD.

The taking of testimony adjourned until further notice.

I do hereby certify that the preceding depositions were reduced to writing by me and signed by the said Jonathan L. Booth and Rufus F. Osgood, respectively, and that I am not of counsel or attorney for either of the parties to the said suit, nor am I interested in the event thereof.

[SEAL.] WM. H. SHEPARD,
Notary Public.

92 Depositions of witnesses taken to be used in an action pending in the U. S. C. court for the northern district of Ohio, wherein Jonathan L. Booth is plaintiff and George Parks et al. are defendants, in pursuance of the notice hereunto attached, and at the time and place therein stated.

The said plaintiff appeared in person and by John E. Casey, his attorney, and the said defendant appeared in person and by his attorney, G. H. Christy, and thereupon the said George Parks et al. produced the following witnesses and other evidence in order, to wit:

The counsel for the defendant offers in evidence certified copies from the U. S. Patent Office of letters patent of the U. States, as follows:

Letters patent No. 9500, granted to Samuel Canby, dated Dec. 25th, 1852, for improvement in winnowing machines, the same being hereunto annexed and marked Defendants' Exhibit No. 1, R. J. W.

Letters patent No. 2649, granted to Daniel Flickinger and Sebastian Krin, dated May 28th, 1842, for machines for cleaning grain, marked Defendants' Exhibit No. 2, R. J. W.

Letters patent No. 21036, granted to B. P. Trimmer, dated July 27th, 1858, for machines for cleaning grain, marked Defendants' Exhibit No. 3, R. J. W.

Adjourned till 1½ p. m.

Taking of testimony resumed.

Met pursuant to adjournment, parties and counsel present as before.

JOHN BEAN, of lawful age, being first duly sworn, in response to the interrogatories propounded, deposeth and saith as follows, to wit:

93 Int. 1st, by defendants' att'y. State your name, age, residence, and occupation.

Ans. John Bean is my name; age is 51; I am now manufacturing pumps. 2. My residence is in Hudson, Michigan.

Int. 2. Were you ever in the business of manufacturing and selling grain separating or winnowing machines, and if so, where and how long?

Ans. I have been in that business. I have manufactured in five different States. I commenced manufacturing in Maine when I was 17 years old; I manufactured there till I was 21. I next started a shop in N. Y. City. I manufactured there one year. I next went into Elizabethtown, N. Jersey. I was there two years. I next commenced manufacturing at Bellville, Richland Co., Ohio. I commenced manufacturing there in 1851. I manufactured mills three years. I next commenced at Hudson, Michigan, in 1853. I kept a shop running there till the war began in 1861.

Int. 3. Did you ever make and sell any such machines having zig-zag screens and directing-boards? and if so, produce, if you can, a model of such machines, and state when and where they were made.

Ans. 3. I have made and sold such machines. This model which I now produce is a model of such machines. I commenced making
94 them in Bellville, Richland, County, Ohio, in the year 1852 and 1858. I made from 30 to 60 per year, and probably a 100 in all. I might have made 200. I also made them at Hudson, Michigan.

(The model produced by witness filed in evidence, and marked Exhibit Bean, R. J. W.)

Int. 4. Describe with reference to the model how, if at all, you varied the construction from time to time.

Ans. 4. I commenced manufacturing the zigzag sieves in Belleville,

Ohio, using first what I called a screen and board over the lower sieve or screen in order to get a longer run of wheat in a small space. This was in the early part of 1852. In 1853 I used another sieve over the board for carrying off material and filth of every kind, wheat falling on the board to be carried forward. That board was beneath the sieve. In 1853 I put on the machine what I called the square shake. It is an even motion shaking both ends alike. In 1856 I still added another sieve and board above the last, making another series.

Int. 5. What was the direction of what you call the square shake as related to the direction of the passage of the grain, lateral or longitudinal?

(Question objected to as leading and suggestive.)

Ans. 5. The direction of the grain was opposite to the shake; while the grain runs forward the sieves shake from side to side.

95 Int. 6. State whether or not the square shake of which you speak is correctly shown in the model Exhibit Bean?

(Question objected to as leading.)

Ans. 6. It is.

Int. 7. Please mark with the letter X the board and screen which you say you added in 1856.

Ans. 7. This one marked X has reference to the sieve, and this one marked XX is the board.

Int. 8. What was the operation on the grain of this sieve and board?

Ans. 8. The operation of this sieve and board was to get a longer run of my wheat, thereby carrying off and separating from the wheat a proportion of the coarse material in grain-filth, white caps and oats. The wheat went through the sieve and the filth was carried off.

Int. 9. When the wheat left the board marked XX state where it fell, and mark the part triple X.

Ans. 9. It fell on a riddle or sieve beneath it, which I have marked XXX.

Int. 10. From this riddle or sieve where did the grain go and where the impurities?

Ans. 10. The grain went through it. The impurities passed over the whole length of this sieve and fell into the box or drawer.

Int. 11. What became of the grain after it passed through the riddle marked XXX?

Ans. 11. It falls on a screen or board. The machine as it now stands has a screen immediately below the screen marked XXX which

96 is shorter than that screen, underneath; the shorter screen is a board of the same length. This shorter screen is marked I and the board II. In screening grain I use over the board II screen marked I. The grain then passed over the screen marked I and falls on another sieve or screen. The impurities pass through screen I and fall on the board II. They pass from that out of the side of the shoe and drop into the screen box. In case the grain does not want screening I place the board II beneath the sieve or riddle XXX. The grain passes over the board and is brought forward again. It falls on the sieve or screen below it. I use either as the case requires.

Int. 12. After the grain falls on the lower screen or sieve what then is the operation?

Ans. 12. If I wish to screen that grain I use a common screen for the grain to fall on. If not, I use sieve or riddle through which the grain passes and drops on the board beneath it, and is carried on the board and passes through a trap-door and drops into the box underneath. If the grain requires further screening it falls on screen III. The foul seed

falls through that screen and on the board marked A; the foul seed then passes through the trap-door into the screen-box at the lower end, the wheat passing over into the wheat-box.

Int. 13. Describe now the construction of your fan case and the direction of the blast in such machines as made by you?

97 Ans. 13. The fan case is constructed at the end of the or mill and a little beneath, as shown in the model. The direction of the blast is forward and upward. I have varied it from an under to an over by reversing the motion of the fans.

Int. 14. I notice there are grooves in the inside of the frame or model Exhibit Bean just at the rear of the fan-box, and also a valve a little lower down; what were these for?

Ans. 14. They were for the purpose of directing or confining the wind; it was constructed with a board running down in the circular grooves in a large machine, down to within ten inches of the cutoff. Upon the under edge of the board in this circular groove is placed what I call a mouth-piece or cutoff, from 4 to 6 inches wide, for the purpose of directing the blast. This mouth-piece or cutoff, the rear edge was inclined upwards. The upper cutoff is not shown in the model, but the nail-holes show where it was inserted. These cutoffs directed the blast between sieves XXX above and III below.

Int. 15. What knowledge have you as to the practical use and operation of these machines?

Ans. 15. My knowledge has been quite extensive. I have used them myself, and seen them used, and sold them. I have used them in Hudson, Michigan, from 1855 to 1860. They gave the best of satisfaction and worked well.

Int. 16. State, if you know, when the model Exhibit Bean was made.

Ans. 16. According to my best recollection, and I have some
98 evidence to prove it, it was made in the early part of 1855, with the exception of the parts which show new work.

Int. 17. Have you had any experience with grain-separating machines in which the sieves add a longitudinal instead of a lateral shape motion; and, if so, which, if either, do you consider the better—particularly for separating oats from wheat?

Ans. 17. I have had a good deal of experience; I have made hundreds both ways; I consider the motion which shakes endwise from the fans or in the direction opposite to the one in the model "Bean" superior for the purpose of separating oats from wheat, from the reason that the oat being the heavier at one end the end motion turns the heavier end forward and slides it over the screen without bobbing it around, while the wheat, being shorter falls through.

Cross-examination by plaintiffs' attorney:

Cross 1. When did you stop manufacturing machines after the model introduced in evidence?

Ans. 1. Not far from 1860 or 1861, immediately after the bombardment of Fort Sumpter.

Cross 2. Was the last machine you made like the one a model of which is now put in evidence in your testimony?

Ans. 2. No, sir; they were not.

Cross 3. Wherein do they differ?

Ans. 3. They, the shoe and sieves, had an end instead of a side motion.

Cross 4. I' that all the difference?

Ans. 4. No, sir.

Cross 5. State wherein they differed from the model.

99 (Objected to so far as it may relate to any machines made by witness subsequent to complainant's alleged invention.)

Ans. 5. The sieve marked III and board marked A moved independent, or had an independent motion. There was no other main difference that I know of. It was ten years ago, and I made so many changes I cannot answer definitely.

Cross 6. In the main, all the machines that you did manufacture substantially resembled the model, did they not?

Ans. 6. No, sir; they did not, not all the machines I manufactured.

Cross 7. In the main, how did they differ?

Ans. 7. They differed in the arrangement of my sieves. Sieve marked X, and its board XX, were not in the main used.

Cross 8. What portion of the model which is now present fairly represents what you did manufacture up to the time you stopped?

Ans. 8. I can state that my machines run with gear wheel instead of belt, and the machines were made without the screen or board marked X, and I think they had covered sides, but I am not positive. It strikes me they did not, but I can't say. I think the balance was very similar to the model.

Cross 9. Were the ends of the sieves united in the machine you made, or were they separated so that the air would pass between the ends?

Ans. 9. The upper sieves, those that were above the blast in this

100 form of machines were tight to admit no wind, but were not fastened together.

Cross 10. How many sieves or screens did you ordinarily use in the machines you manufactured when in use?

Ans. 10. From 4 to 7.

Cross 11. The only ones, I understand you to say, that were united, or fastened together, so as to prevent the air from passing between them, were the two upper ones?

Ans. 11. That was mainly the case.

Cross 12. Why were not the ends or sides of the others united in your machines?

Ans. 12. They were placed mostly lower down. The lower two were not united to the upper two. I left them open to get the fall of grain, one thing for the blast to pass through.

Cross 13. You left the space open between some of the sieves in order that the air from the fans might pass through the grain in its fall from one sieve to another, did you not?

Ans. 13. I did.

Cross 14. Now, look at the model and state whether the ends of the two last sieves come together.

Ans. 14. Sometimes I did use them that came together for certain kinds of grain. They do not in the model.

Cross 15. What kind of grain do you refer to when you use the two last sieves with the ends connected together?

Ans. 15. Cleaning wheat that is very filthy.

101 Cross 16. Can you tell wherein the machines manufactured according to this model differ from the old fashioned fanning mill? I mean substantially differ in the operation and results. Confine yourself in your answer fairly to the question.

(Objected to for indefiniteness, and that it does not anywhere appear in this case what the old fashioned fanning-mill was, and the old fashioned fanning-mills familiar to the counsel and to the witness may have been, and probably were, very different.)

Ans. 17. I can. By the arrangement of this machine I get a longer run of the wheat and a double sifting in a smaller space than in the old fashioned machines, thereby cleaning the wheat more perfectly.

Cross 18. Is there no other difference?

Ans. 18. There is.

Cross 19. What is it?

Ans. 19. The wheat passes through more screens and sieves, with boards beneath for the purpose of carrying the wheat back and sifting it over. It has a short motion, quicker than the motion in the old fashioned mills, and having a square shake instead of a switch motion attached to one end.

Cross 20. Did not the old fashioned fanning-mill have from 4 to 7 movable and inclined sieves like your model has?

Ans. 20. No, sir.

Cross 21. How many did you ever see in a fanning-mill?

Ans. 21. Usually from 3 to 4.

Cross 22. Did you ever see more than that number?

102 (The foregoing and all further cross-examination relating to the old fashioned fanning-mills objected to as not proper cross-examination.)

Ans. 22. I have.

Cross 23. Did not the old fanning-mill have the same lateral motion of the sieves that your model represents?

Ans. 23. None that I ever saw had.

Cross 24. Wasn't it about the same motion—crossways, sideways of the machine?

Ans. 24. They had what I call the switch motion—crossways—one end moving further than the other.

Cross 25. Did not the air blow through from the fan between the sieves just as it does in your model and for the same purpose?

Ans. 25. No, sir; it didn't blow through just as it does in the model.

Cross 26. What difference was there?

Ans. 26. There is no mouth-piece in those machines for directing the wind.

Cross 27. In the manufacture of these machines that you have referred to, and which you say were substantially like the model, what name did you call them?

Ans. 27. I manufactured those machines, or similar ones, under different names. I called this machine Keller's patent, improved and manufactured by J. Bean. Hudson machine was on the machine. I called it a grain-seperator.

Cross 28. What do you mean when you speak of a zigzag screen or screens when referring to your model? Please explain.

103 Ans. 28. I mean a double series of sieves inclined out, so that the grain, as it passes down over a zigzag plain, first out and then back.

Cross 29. Did you ever make a zigzag sieve?

Ans. 29. I have by putting two together.

Cross 30. When and how?

Ans. 30. In my separator, as described in the model.

Cross 31. Now in your model will you please state where you find the first zigzag sieve?

Ans. 31. The first series commence under the hopper, marked X, with its board, marked X X, beneath it.

Cross 32. Where is the next zigzag sieve?

Ans. 32. Beneath X, and the sieve is marked X X X. With its board both of them form a zigzag; there are three.

Cross 33. Where is the third one?

Ans. 33. Beneath the upper one.

Cross 34. Is the same operation performed by each sieve until it (the grain) passes through the whole of them?

(Objected to for the reason that the witness has already answered the question by explaining the operation of each sieve separately.)

Ans. 34. That depends upon the kind of grain I wish to clean—the state it is in.

Cross 35. How long have you known the defendants Parks, Turner, Taylor, and Vaughan?

Ans. 35. I do not know them at all only by name, only as a firm. I would not know them one from another certainly.

104 Cross 36. Who sent for you to come here to testify?

Ans. 36. A letter was signed by the firm. I cannot tell you who.

Cross 37. Where did you find this model?

Ans. 37. I found it in the hands of Alonzo Palmer, Hudson, Michigan. He lived in Pittsford at the time.

Cross 38. When did you first hear of the firm of Turner, Parks & Co.?

Ans. 38. One year ago last fall.

Cross 39. When did you first have an interview with any member of the firm on the subject of this suit?

Ans. 39. It was some time during the fore part of last fall, I think, at my shop, in Hudson, Michigan. It was the grayish, shortish man who was there this afternoon—a little stooping. I have been introduced to them all, but I am so forgetful of names that I cannot remember any one of them.

Cross 40. How many of the machines that you have described did you manufacture with that upper sieve?

Ans. 40. I can't say certain, but not a great many.

Cross 41. Did you ever manufacture more than one?

Ans. 41. We did, according to the best of my recollection; generally manufactured them without.

105 Cross 42. Can you tell the name of a single person to whom you ever sold one of those machines with the upper sieve as represented in the model?

Ans. 42. I cannot; they went in with the other mills, and were sold. It is so long ago I can't remember.

Adjourned till 7 p. m.

Resumed:

Cross 43. When did you make this upper sieve as now in the model?

Ans. 43. Last week.

Cross 44. Did the machine you made with this upper sieve have the perforated zinc piece attached to the upper sieve as represented in the model?

Ans. 44. I cannot tell you. I have forgotten which I used. I used both at the time, but do not know which I put there.

Cross 45. Do you mean to swear that you ever used a piece of perforated zinc, with holes in the same, in the machines made by you as represented in the upper sieve in the model?

Ans. 45. I do.

Cross 46. When?

Ans. 46. I have used it in the year 1856, 1857, and 1858, in nearly all of the machines I then manufactured.

Cross 47. Did you use in those machines the perforated zinc as represented in the upper sieve of your model?

106 (Objected to as ambiguous, it not being clear from the question whether the use of such a plate in the upper sieve alone is meant, or in any sieve of the machine.)

Ans. 47. I do not understand whether you mean the perforated zinc upon that identical sieve or whether it has relation to the ones below it.

Cross 48. You see before you a part of your model called the upper sieve, and on it there is a piece of perforated zinc. I want to know if in the manufacture of your machines, previous to 1861, you put a piece of zinc on the top of the upper sieve of these in the same way and of the same kind, and the same sized holes as is on the upper sieve of the model?

(Question objected to, because it has been already answered.)

Ans. 48. I swear that I used zinc on my sieves of the same kind, but cannot say whether I used it on the identical sieve which I represent in this model. If I did not use it on the sieve marked X, I used it on the sieve marked XXX.

Cross 49. What difference was there, in the machines you manufactured, in the operation on the grain of each sieve until it passed through?

Ans. 49. That varied in proportion to the kind of grain I used
107 and what I wished to do to it.

Cross 50. Were the meshes in the sieve used by you of a uniform size, or did they vary in size in the different sieves?

Ans. 50. The zinc sieves were all alike, of the same size. The other screen varied in proportion to the different kind of grain I wished to clean.

Cross 51. Does the wheat, if you are cleaning wheat, run over or through the last sieve in your machine?

Ans. It runs through it, providing I do not wish to screen it.

Cross 52. To whom did you generally sell these machines you manufactured?

Ans. 52. Almost invariably to farmers. I put one into S. M. Winks' grist-mill, at Hudson, Michigan.

Redirect examination:

Int. 18. When did you put the machine into Winks' grist-mill, as testified by you in your last answer? and state, if you know, how it operated—that is, whether satisfactorily or otherwise.

Ans. I have not the means of telling when it was. I think it was in 1854, and had all the sieves and boards, except the upper one, marked X. It operated well. They kept it in use till the mill stopped running and till it was worn out.

JOHN BEAN.

Adjourned till 8 a. m. to-morrow, the 17th.

108 Met pursuant to adjournment.

Parties and counsel here same as before.

Also JOHNATHAN L. BOOTH, of lawful age, being first duly sworn, deposeth and saith in reply to the interrogatories propounded, as follows, to wit:

Int. 1. Are you the complainant in this case?

Ans. 1. I am.

Int. 2. Examine the printed circular now shown to you, and state

whether or not it is a copy of the circular issued by you at or about the time it bears date, July 19th, 1871.

(Question and answer objected to as immaterial, incomplete, and irrelevant.)

Ans. 2. It is in main a copy. There are some marks in pencil upon it that I do not recognize. The diagram and printed parts are a correct copy.

Int. 3. I read from page 4 of the printed part of the circular as follows:

"But to return to Vaughen & Baxter's defense of my suit. Finding that my reissue was likely to overtake them, their next resort was to try and find that my machine, so far as the zigzag sieves were old, and to that end found that to one of my old separators, patented 1851, sold to an Akron, Ohio, miller, this machine (see cut, in this report) having but one sieve, the miller had fixed upon and over this sieve another sieve, having a reverse inclination and with a return board. This
109 being prior to my patent of 1859, it was thought by this high-minded company, called Turner, Parks & Co., that it would work destruction to my oat separator. Take notice here that the Akron machine never was used for the separation of oats from wheat (neither could it do so), and withal winter wheat was exclusively ground there. The object of this extra sieve was to riddle out straws and sticks and more thoroughly rid the grain from coarse stuff. No other machine was made like it. No more was ever used in that manner, and it was not even considered worth the cost of the patent. Notwithstanding all this, I concluded to again withdraw my suit at an expense of several hundred dollars, make a second application for a reissue, after first publishing a notice in the Chicago Tribune, warning and notifying all persons against using machines infringing on my patent. My reissue being obtained, I went again to Chicago, employed another attorney, commenced another suit against this Baxter and others using the machine. This case was not followed up, as other prior engagements would not release my time. To remove all further argument as to the Akron machine containing any prior similarity, I confined myself in the last reissue to the combination of the sieves, of zigzag sieves, with a lateral shaped motion; the same, of course, as was found in my model,
110 and which was not found in the Akron machine, but is used with the zigzag sieves in the Vaughan machine, as well as mine."

Please follow the above extract as contained in the circular with your eye while the commissioner reads to the copy thereof as he has written it down, and then state whether or not the copy is correctly made or not.

Ans. 3. It is correct.

Cross-examination:

Cross 1. Is the extract above set forth in your last answer to the last direct interrogatory all of the printed circular?

Ans. 1. It is not.

Cross 2. Please attach to your deposition the circular containing the above extract and mark the same Exhibit O.

(Objected to for any other purpose than as evidence that the statements therein contained were made by complainant.)

Ans. 2. I do attach it and mark it O, R. J. W.

Cross 3. Did the counsel for the complainant in your hearing request the counsel for the defendant to attach the circular marked "O" to your testimony while being examined by the counsel for the defendants, and after the above extracts were made and answered was the same refused?

(Objected to as improper, since the counsel for complainant, if he had any requests to make, should have made them on the record at the time.)

Ans. 3. It was.

111 (Counsel for defendants suggests that he does not remember of such a request being made at the time indicated in the last interrogatory.)

J. L. BOOTH.

Also JAMES A. VAUGHAN, of lawful age, being first duly sworn, deposeth and saith in response to the interrogatories propounded as follows, to wit:

Int. 1. State your name, age, residence, and occupation.

Ans. 1. James A. Vaughan is my name; age is 43 years; Cuyahoga Falls, Summit Co., Ohio; occupation, machinist.

Int. 2. Are you one of the defendants in this case?

Ans. 2. I am.

Int. 3. Are you the patentee of the Vaughan separater?

Ans. 3. I am.

Int. 4. How far had you progressed with the construction of your first machine before you learned the construction of the machine known as the Booth separater.

Ans. 4. I had one in successful operation.

Cross-examination:

Cross 1. Can you state the date of your first acquaintance with complainant?

Ans. 1. I cannot distinctly; I never spoke a word to him, nor had any acquaintance with him until 1859, as I recollect.

112 Cross 2. Where were you born?

Ans. 2. Born in Pennsylvania.

Cross 3. When did you come to Cuyahoga Falls?

Ans. 3. In the spring of 1852. Four years previous to this I was a machinist, engine building, and general machinery of all descriptions. I was about 23, I think, when I came there. Before I came to the Falls I worked as a machinist in Greenville, Penn. After I came to the Falls I worked at the machinist business. I formed partnership with Turner, Parks & Co., in Jan. or Feb., 1857. I had seen Mr. Booth on the streets from about the first I had lived in the town. I knew of Booth's business by general reputation, I presume. I knew that Booth was manufacturing separators for two years more or less before this, before I went into the firm of Turner, Parks & Co., in 1857.

Cross 4. State what different kinds of business besides manufacturing separators, and did you know the complainant to be engaged in, in this county prior and during the year 1859.

Ans. 4. After my association with Turner, Parks & Co., I learned, I presume indirectly, that he was engaged in the manufacture of smutters.

Cross 5. Did you not know that Mr. Booth in 1859 was engaged

113 in getting up various kinds of machines connected with the cleaning of grain for flour mills?

Ans. 5. In Sept., 1859, I think it was, I learned by letters patent shown to me that he had got a new machine patented.

Cross 6. A new machine for what?

Ans. 6. For cleaning wheat.

Cross 7. Did you know when Mr. Booth left Cuy. Falls some time in 1857 and went to N. Y. City?

Ans. 7. I do not. I do not remember of his being absent from the Falls from 1857 to 1859.

Cross 8. How early in the year 1859 do you remember first seeing Mr. Booth at the Falls?

Ans. 8. I think I could not say that I saw him before the middle of Sept. I may have seen him a hundred times before that, but I have no recollection of it.

Cross 9. When did you first speak to Mr. Booth in 1859?

Ans. 9. I think it must have been about the middle of Sept. I am not certain by a few days. That is the first I recollect of speaking to Mr. Booth.

Cross 10. What business did you do in the year 1859 or 1860 with Hatfield & Co. at the Falls?

Ans. 10. I do not know that we did any; we may have got castings; not able to state.

114 Cross 11. How far was Hatfield & Co.'s establishment at that time from yours?

Ans. 11. I should think it was a quarter of a mile, or about that.

Cross 12. In 1859, prior to Sept., did you not understand from some of your partners or other persons at the Falls that the complainant was then engaged and had been for a good many years in getting up machines for cleaning and separating grain connected with flouring mills?

Ans. 12. I think I have answered that question in my answers.

Cross 13. Please answer it again.

Ans. 13. After I had become a partner of Turner, Parks & Co., I presume I had heard of his making machines.

Cross 14. Will the notary please read the question and obtain a direct answer from the witness?

(Question objected to as not proper cross-examination and as an effort to mislead witness after he has as he thinks already answered it.)

Ans. 14. I cannot place a distinct recollection in my mind of that kind.

Cross 15. Did you not learn in the spring of 1859, from one of your partners or any other source, that the complainant, Mr. Booth, was then engaged at the shop of Hatfield & Co., Cuyahoga Falls, in constructing a grain separator for extracting oats from wheat?

115 (Objection continued.)

Ans. 15. I did not.

Cross 16. Did you know during the spring of 1859 that he was engaged in constructing some kind of a grain separator at Hatfield & Co.'s works, and did you at that time know the members of the firm of Hatfield & Co.?

(Objection continued.)

Ans. 16. I did not know that he was particularly constructing any machine. I do not know whether it was Hatfield alone or Hatfield and Smith. I have no recollection in the matter.

Cross 17. Did not your partners, Turner and Parks, or one of them, inform you in Sept., 1859, that the complainant had obtained a patent for a grain separator?

Ans. 17. I could not say; my opinion is they did not.

Cross 18. Will you swear that they never did tell you that the complainant had obtained a patent for a grain separator in the fall and winter of 1859?

(Objected to as not cross-examination, immaterial and irrelevant.)

Ans. 18. I would not swear. I think they did not. Mr. Booth exhibited to the firm of Turner, Parks & Co., of which I was one, and in my

presence, his copy of his letters patent, which was the first intimation that I ever had that he had a patent on a machine of that kind.

116 Cross 19. When was that, and where?

Ans. 19. That was about the middle of Sept.—I am not certain to a few days—and in our manufacturing establishment.

Cross 20. What was the object as obtained from the complainant of his visit to your manufactory at this time?

(Objected to as not proper cross-examination, and also because the complainant himself is the proper party by whom to prove the object of his visit, and also because the complainant has already given his testimony in that matter.)

Ans. 20. It was to see my separator.

Cross 21. Where was your separator then?

Ans. 21. It was in our manufactory.

Cross 22. Is that the one separator that you say in your direct examination was in successful operation?

Ans. 22. It was.

Cross 23. Did not Mr. Booth then tell you at that time that he had a patent for the identical machine which you there exhibited to him?

(Objected to as not proper cross-examination.)

Ans. 23. He exhibited his papers and also claimed that the machine shown him was his invention.

Cross 24. When the complainant first came to your factory and exhibited to you his letters patent, did he not state to you he heard

117 that you had a grain separator, and did you not refuse to let him see the machine?

Ans. 24. Mr. Booth visited our shop some days previous to the time I saw him, and asked Mr. Turner or some of my partners to show him the machine, which they refused to do. I was absent at the time.

Adjourned till 1½ p. m.

Met pursuant to adjournment. Parties and counsel same as before.

Cross 25. What do you mean when you say that your grain separator was in successful operation at the time that you learned that Booth had invented one?

Ans. 25. I mean that we had it set up in the shop with a belt attached and ran from one to three bushels of wheat through it when we desired to.

Cross 26. How many of these machines called the Vaughan machines have you manufactured and sold since that time down to the commencement of this suit?

(Objected to as not cross-examination and in the form in which it is put not competent.)

Ans. 26. I could not tell you. I have an idea. I never counted them.

Cross 27. Can you tell from your books?

(Objection continued.)

Ans. 27. I presume our books would give the number nearly; they might not give all.

118 Cross 28. Will you procure a statement of the number of the machines manufactured by your firm from the 29th of Nov., 1864, down to the time of the filing of the bill, April 21st, 1871, and attach the same to this deposition?

(Counsel for defendants deny the right of complainant to call for any account or any part thereof till such right is established by decree of the court after hearing, and counsel requests the witness to decline producing such a statement at the present time.)

Ans. 23. I do so decline.

Cross 28. When did you manufacture the next machines after the one you have testified about, and to whom did you sell it, and when and where was it put up?

(Objected to as not proper cross-examination.)

Ans. 29. I am not certain as to the time; I do not know whether it was before or after we got a patent; I am not able to state; I do not know whether I have any right to answer that question at present.

Cross 30. Do you refuse to answer it?

(Counsel for the defendants deny the right of complainants to make any inquiry as to alleged actual infringement prior to the date of his last reissue, and request witness to decline making further answer to the interrogatory.)

Ans. 30. I decline answering.

Cross 31. How many machines of the kind which you say were in successful operation at the time when Mr. Booth showed you his
119 patent did you make during the year 1859 & 1860 and put in operation or that were put in operation by others?

(Counsel for complainant is requested to state the object of the last interrogatory and wait 60 seconds for a reply.)

Ans. 31. I couldn't tell you; I have no record; there was more than one and more than two, however.

Cross 32. When did you commence the construction of the first machine referred to by you in your direct examination, where and who were engaged with you in its construction?

Ans. 32. I think it was in August, of 1859, that I began the construction of that machine; it was made under my instructions by our workmen; I acted as superintendent of the works; it was commenced in our shop at Cuyahoga Falls.

Cross 33. What are the names of the men that worked on the machine?

Ans. 33. John Eddie was one of the men that worked on the machine; Charles Hunt another; I do not know that there were any others now.

Cross 34. Can you now state whether the machine which you constructed in your shop at the time when you learned that Booth had invented a separator was the same in form and substance as the one
120 which you continued to manufacture afterward?

Ans. 34. I would state that it is identically the same in every particular with these exceptions: That in that machine there were 7 riddles for screening wheat and one cockle riddle, with another exception, the holes were for the wheat to pass through of one size. I would also further state that I believe the model upon which the patent was granted has 7 riddles; I have not consulted the papers, but I believe there are seven riddles in the model shown.

Cross 35. Describe in what your invention consisted, in the machine referred to, and for which you made application for a patent.

(Objected to, for the reason that it is not cross-examination and the witness is not called as an expert in patent matters, and that for the purposes of this suit the patent itself is the best evidence as the invention.)

Ans. 35. To answer that question I guess I should have to have a model to show the points of the machine.

Cross 36. Where did you get your first idea of zigzag sieves?

Ans. 36. The plan of zigzag sieves occurred to me from the oat separators that we were manufacturing previous to 1859 or in the early part of 1859.

121 Cross 37. How was this oat separator constructed? Describe it.

Ans. 37. It had two or three riddles, inclining all in one direction. To describe it properly I should require a model.

Cross 38. You are not a practical miller?

Ans. 38. No, sir.

Cross 39. You simply manufacture machines such as you have described, but have no practical knowledge of their use in mills?

Ans. 39. I have gained some practical knowledge in regard to such machines.

Cross 40. When was the first time you ever saw a zigzag sieve such as are made in your and Booth's separator?

Ans. 40. The first one that I ever saw was the one that I made; the next one that I saw was in the board of trade building in Chicago, in Jan., 1860.

Redirect examination:

Int. 5. When did the plan of zigzag sieves and directing boards for grain separators first occur to you?

Ans. 5. I think it was about the middle of August, 1859.

Int. 6. How do the sales of the Vaughan separator, say for the past year, compare with the sales previously? Are they greater or less?

Ans. 6. Very much less.

122 Int. 7. How much of a trade have you in that line now?

Ans. 7. It is almost nothing.

Int. 8. State the reason, if you know any, for such fall off.

(Question objected to as incompetent, irrelevant, and immaterial.)

Ans. 8. We attribute the short sales to two causes: Mainly, to the introduction of dustless separators, so called; and, second, to the flooding of the country with circulars by J. L. Booth.

Int. 9. In the dustless separators you speak of, state, if you know, the direction of the shake motion.

Ans. 9. They have the end motion generally; I mean opposite to the lateral shake. Dustless separators are manufactured at Moline, Illinois.

Cross 41. When did you commence to manufacture the dustless separator, and to what extent did you manufacture them?

Ans. 41. I think, as near as my recollection serves me, we commenced to manufacture them about a year ago last May or April—perhaps a little earlier—perhaps two years since; we have made, perhaps, thirty; I could not state positively.

Cross 42. How many sieves are there in the dustless separators?

Ans. 42. From two to five.

123 Cross 43. Have you obtained the right to manufacture the dustless from the Illinois parties, or do you merely copy after their invention?

(Objected to as immaterial, the rights of other patentees not being in question in this controversy.)

Ans. 43. We hold letters patent in our possession, under which we manufacture them.

Cross 44. Witness, is it not the truth that the falling off of your sales during the past year of Vaughan's separators is attributable to the fact that you have introduced the dustless in its stead, and would not that have been nearer the truth than that Booth's circular was the cause of the falling off?

Ans. 44. I am decidedly of the opinion that it is not.

Cross 45. Was not the Moline dustless separator patented before your

dustless, and did you not see the Moline machines before you commenced manufacturing them?

(Objected to as immaterial.)

Ans. 45. As to the date of the Moline patent, I can't speak; I don't know; I decline to answer the latter part of the question. The patent under which we manufacture the dustless was issued in 1861 originally.

124 (On further consideration, and on being threatened with an attachment, the witness answers as follows:) We made the dustless machine before we ever saw a Moline machine.

Cross 46. Did you not see a drawing or diagram of the Moline dustless, or have it described to you, before you manufactured your dustless?

(Objection continued.)

Ans. 46. I am not able to state; I have not seen drawings; I have seen a cut on the circular.

The witness desires to explain his answer to cross-interrogatory No. 45, as follows: I do not know whether I saw the Moline machine before or after we manufactured the first machine spoken of in interrogatory No. 47. Mr. Turner made that first machine in Baltimore.

Cross 47. Has your firm commenced a suit in the U. S. court at St. Louis against A. K. Haltman, your former agent for the sale of the Vaughan separator, for infringing on your patent by the manufacture and sale of machines which you claim are covered by that patent?

Ans. 47. We have.

Cross 48. What are those machines manufactured by Haltman called?

Ans. 48. I think they are called the St. Louis oat & weed extracter.

125 Cross 49. When was this suit commenced, and is it still pending?

Ans. 49. As to the commencement of the suit, I cannot tell; I think a year, or about a year; it is still pending.

Int. 10. In the dustless separator manufactured by your firm, what is the direction of the shake motion?

Ans. 10. It has the same direction as the Moline, the end shake.

J. A. VAUGHN.

Also JOHN SCHUPHOLM, of lawful age, being first duly sworn, deposeth and saith in reply to the interrogatories propounded as follows, to wit:

Int. 1. State your name, age, residence, and occupation.

Ans. 1. John Scupholm; age, 52 years; reside at Cuyahoga Falls; miller.

Int. 2. Where did you work in 1857 and 1858, and for whom, and at what business?

Ans. 2. At Ætna mills, Akron, Ohio; for George Buel & Co., at milling.

Int. 3. State what kind of a grain separator was in use at that mill then, and produce, if you can, a model of it.

Ans. 3. Booth's grain separator; this is a model of it standing on the table here. Model referred to by witness filed in evidence, and marked Exhibit Akron, R. J. W.)

126 Int. 4. State at what date they commenced using in that mill a grain-separator like Exhibit Akron.

Ans. 4. In the spring of 1857; April, I believe.

Int. 5. Were any changes made in it while you were there; and, if so, when were they made and what were they?

Ans. 5. There were changes made in it; they were made the next spring—the spring of 1858. They put an extra sieve on the top of the lower one. The shake was changed some. The springs were first used, and then an eccentric like the model.

Int. 6. Is that extra sieve shown in the model Exhibit Akron? and, if so, point it out that the commissioner may mark it with a W.

Ans. 6. This upper sieve is the one. I have marked the sieve with the letter W, as requested. R. J. W.

Int. 7. Was the board or plate under this upper sieve put in at the same time or afterwards?

Ans. 7. It was put in at the same time.

Int. 8. Who made this change?

Ans. 8. Mr. Eaves; he was millwright there at that time; he is dead now.

Int. 9. How do you fix the time when these changes were made as the spring of 1858?

Ans. 9. By my youngest boy's birthday.

127 It is agreed by counsel that model Exhibit Akron, with the exception of all that is above the upper face of the lower sieve and the side spouts is a fair representation of the machine patented by Booth, the complainant, in 1851, and by him sold to the proprietors of the Ætna mills.

his
JOHN × SCUPHOLM.
mark.

JAMES A. VAUGHN recalled.

Int. 1. How many sieves did the Vaughn separater, as made and sold by your firm, generally contain?

Ans. 1. Five wheat riddles and 1 cockle riddle.

Cross-examination:

X 1. What machines did you state in your previous testimony contained, I think, seven sieves?

Ans. 1. It was my first machine, and the model contained seven grain sieves and one cockle.

X 2. Now, Mr. Vaughn, are you confident, so sure that you are willing to swear to it, that the model and the first machine contained that number of sieves?

Ans. 2. I am sure as to the first machine, but as to the model I am not certain on that point. I saw the first machine I made about one year ago the last time, in Cuyahoga Falls. If this machine is in ex-

128 istence it is in Upson's or James' mill at Cuyahoga Falls.

J. A. VAUGHN

Models Exhibits 4 and 5, R. J. W., filed in evidence by consent to be used in illustration at the hearing so far as they may be competent.

Counsel for defendant files in evidence letters-patent No. 12341 to John Bean and Benjamin Wright, dated the 6th of February, 1855, for improvement in smut machines, marked Exhibit No. 6; also a certified of the specification and drawing in the application of John Bean, filed May 19th, 1853, for improvement in grain separater, marked Exhibit No. 7, R. J. W.; also a certified copy of the specification and drawing in letters patent granted Stephen M. Yeaman, dated June 20th, 1846, No. 4591, for improvement in wheat fans, marked Exhibit No. 8, R. J. W.; also a certified copy of the specification and drawing in letters-patent granted to J. L. Booth April 8th, 1851, No. 8033, for fan-blast

grain separator, marked Exhibit No. 9, R. J. W.; also reissued letters-patent No. 90, granted to James A. Vaughan, dated the 11th of June, 1861, for improvement in grain separators, being a reissue of original patent dated April 24th, 1860, and marked Exhibit No. 10, R. J. W.

129 I, R. J. Winters, a notary public of the State of Ohio, in and for the county of Summit, do hereby certify that the above-named John Bean, J. L. Booth, James A. Vaughan, and John Scupholm were by me first duly sworn to testify the truth, the whole truth, and nothing but the truth; that the foregoing depositions by them respectively subscribed (and other evidence) were reduced to writing by me and written, and by said witnesses respectively subscribed in my presence, and were taken at the time and place specified in the enclosed notice.

In testimony whereof I have hereunto set my hand and official seal this 18th day of January, A. D. 1872.

[SEAL.] R. J. WINTERS,
Notary Public.

130 U. S. circuit court, northern district of Ohio. In equity.

J. L. BOOTH
v.
PARKS ET AL.

U. S. circuit court, southern district of New York. In equity.

J. L. BOOTH
v.
T. W. BAXTER.

Testimony taken by consent at Pittsburgh, Pa., May 30th, 1873, before T. B. Kerr, notary public.

Present, plaintiff & J. B. Perkins, his att'y, & G. B. Turner, one of defendants, & W. Bakewell, his att'y.

JONATHAN L. BOOTH, recalled as a witness on his own behalf, in answer to interrogatories deposes and says:

I have examined the models of the machines and the specifications and drawings attached to the letters patent put in evidence in this case by the defendants. I notice decided difference between the machines shown by plaintiff's Exhibit A & B, and the various exhibits of the defendants, except in the exhibit of the machine manufactured by the def'ts themselves. I could not describe the difference except in a general sense, other than to take each exhibit and specification by themselves, and compare them with my Exhibits A & B, but would say in a general sense, I can see no similarity; I see no series of zigzag *seives* and boxes. I see no series of zigzag *seives* and boxes having a lateral shake motion, or one at right angles to the passage of the grain, in such a manner
131 as to have the grain pass consecutively over & through them & arranged relatively with each other, to operate substantially the same as shown by my patent; I also do not see or discover any series of zigzag screens or boxes, having a lateral shake motion in connection with a fan & spout, substantially the same as shown in my letters patent.

I do not discover in any of the defendants' exhibits, any combinations of parts for cleaning grain, operating similarly to mine, nor do I find

any where they have a lateral shake motion, except that the series in the Bean machine, such as they are, have a lateral shake motion.

(Witness' attention is called to the exhibits describing a grain separator and marked Exhibit Bean.)

Exhibit Bean shows no series of zigzag *seives* & boxes. The first *seive* of this machine takes the place of first *seive* in any common fanning mill, or is supposed to, which is to screen out sticks, straws & coarse material from grain, but it evidently wouldn't do that, for the reason that the *seive* is very nearly flat, hardly any fall or pitch. Nor has the first *seive* any return board returning the grain on to the upper line of the next lower *seive*, there being a material space, allowing the oats to pitch endwise through such succeeding *seive*, only allowing about half of the bulk of the grain to be cleaned, the same not
132 having been returned in any sense, to the upper ledge of the succeeding *seive*.

The succeeding *seive*, also, has no box or return board, hence there are no zigzag *seives* & boxes, neither is there any series of the same. The lateral motion alluded to, when driven at a high rate of speed, as is necessary for a good effect is too long a throw, and the attachment is too far at one side of the centre of weight to render the effect practical, if said machine had a series of *seives* & boxes. The machine has no spout and the fan is differently located and could not be made to work for any purpose for which my machine was intended.

1. Question. State whether or not in your opinion, there are substantial and material differences between the Bean exhibits and your Exhibit A & B, in principle or in mode of operation.

Ans. I think there are, both in principle & mode of operation.

2. State what would be the difference, if any, between yours and the Bean machine, in the practical operation.

Ans. The Bean machine would not work in any sense, for the purpose for which my machine was constructed. While my machine separates the oats from the wheat in a thorough, practical manner, the Bean machine will not.

133 (Witness' attention is called to Exhibit Akron.)

3. State the material differences, if any, between yours and the Akron machines.

Ans. The Akron machine has no series of zigzag *seives* & boxes, has no lateral motion of the *seives*, the motion is the reverse of that of my machine. The *seives* on the Akron machine would not screen oats from wheat, for two reasons, the perforations were too large, and if they were the same size as those in my machine, the oats would go through the same with the wheat, before they would run over the end, in consequence of the too great length of the perforations over which the oats had to travel & the greater flatness of the *seive* necessary to the prevention of the wheatrunning over the end, producing thereby waste or loss. The said necessary flatness of the *seive*, is directly due to the peculiar longitudinal motion of this machine.

4. State the difference in the practical working of two *seives*, as shown by the Akron machine & a series of *seives* as shown in yours.

Ans. I should say the Akron machine would not in any practical degree, separate oats from wheat.

5. State whether or not in your opinion there are substantial
134 and material differences between the Akron exhibit and your Exhibits A & B, in principle or in mode of operation.

Ans. Yes, I do, in both.

Cross-examined by Mr. BAKEWELL for def'ts:

X 1. Were you present, & did you hear the testimony of John Bean in regard to model, Exhibit Bean?

Ans. I was present & did hear it.

X 2. Did he not state in substance that the board marked X, under the screen which was placed under the hopper, was for the purpose of setting a longer run of the wheat, thereby carrying off & separating from the wheat a portion of the coarse material, filth, white caps, & oats

Ans. I should have to refer you to his answer for that?

X 3. In replying to the interrogatories put to you this morning by your counsel, Mr. Perkins, did you not have in your hand a copy of the printed testimony in this case, & did you not consult it from time to time?

Ans. Since the testimony commenced I had a copy in my hand. I have not consulted it in reference to any answer given.

135 X 4. Do you mean to say that you merely held it in your hand, without looking at it or reading it.

Ans. I can't say whether it was since the examination closed or just before, I did look to see if Mr. Bean was examined in this case as an expert.

X Question 5. Please to look at Exhibit Guersenheimer (being the new model put in evidence by defendants this morning), & state what purpose the first screen was intended to subserve in that model, or in the model Exhibit Bean, of which it purports to be a duplicate.

Ans. I should say that it was for the purpose of screening out any coarse substances which would not pass through.

X 6. Please to look at these two models & state where the grain, placed in the hopper, would go, supposing the screens, seives, and boards to be placed as they now are placed, they being adjusted differently from what they were when you were examined in chief?

Ans. All of the grain put in the hopper, which is smaller than the meshes of the upper seive would pass through the upper seive.

X 7. Would it fall on the board X X?

136 Ans. A portion of it would fall on to X X and another portion would fall directly on the seive X X X.

X 8. Would not the grain passing through the meshes of the seive X X X fall on the board beneath it?

Ans. It would.

X 9. State whether the oats would not pass over the surface of the seive X X X or drop into the drawer or box of the machine?

Ans. They would not.

X 10. Why not?

Ans. In the first place, the meshes are too large, allowing the oats to pass through with the wheat. 2nd. The seive is too flat. 3rd. The oats have too far to travel from the upper part of the seive to the lower end of it, they all passing through with the wheat.

X 11. Supposing the wire net placed in the seive referred to in last answer were of the proper size of mesh for screening oats from wheat, would not the wheat pass through on to the board beneath & the oats pass over the seive into the drawer below?

137 Ans. If the model was itself, as it is now made & intended to be, a practical working machine, a portion of the oats would go over into the box below, but if enlarged, in the same proportion so as to be of the size of a common fanning mill, I do not think they would.

X 12. If enlarged as you have suggested, the meshes of the seive

would be about big enough to separate hickory-nuts from walnuts, would they not?

Ans. I referred in my answer, not to the meshes, but to the distance the oats would have to travel over the meshes, i. e., to the size of the seive.

X 13. The wheat dropping onto the board below the seive X X X would then fall onto the board forming the upper end of the lowest inclined seive, & if the meshes of that seive were of the proper size, would pass through the meshes or through the trap or hole into the drawer beneath, would it not?

Ans. I think not to any degree of perfection; it might to some extent, for the reason of a horizontal blast of air rushing out under the board, under the said X X X, thereby throwing over into the box below a sufficient amount or proportion of wheat & oats to make the operation impracticable.

Redirect:

138 Int. 1. Why do you think a portion of the oats would pass over the seive X X X into the box below, if it was of the size used in common fanning mills?

Ans. Because the oats would have to travel over so much screening surface in a full sized machine that they would pass through the meshes with the wheat before they got to the end of the seive.

Witness desires to alter his answer to cross-question 11 by saying: Where I say "a portion of the oats would go over into the box below," I wish to add that they would go into the box below, was their course not diverted by the horizontal current of air from the fan.

J. L. BOOTH.

The evidence in this case is now closed on both sides.

[SEAL.] T. B. KERR,
Notary Public.

It is hereby stipulated by the attorneys on both sides that the agreement in relation to the introduction, on the part of the defendants, of the model of the bean machine, made by Guisenheimer, & the testimony of Jonathan L. Booth, on the part of complainant, this day taken before T. B. Kerr, notary public, need not be formally certified nor filed with the clerk of the court in either of the cases, & that all objections to the time of taking the testimony, to the officer before whom it was taken, & all other formal objections are hereby waived.

139 COGSWELL & PERKINS,
Att'ys for Compl't.
W. BAKEWELL,
Att'y for Respondents.

PITTSBURGH, *May 30th*, 1873.

140 U. S. circuit court, northern district of Ohio.

J. L. BOOTH
vs.
PARKS ET AL.

Please take notice that further testimony will be taken in above cause on behalf of complainants, at the city of Rochester, State of New York, on the 27th day of February, instant, at 10 o'clock a. m., at the office of

John S. Morgan, esq., notary public, No. 91 Powers Block, in said city of Rochester.

WILLEY, CANY & TERRELL,
Sol's for Complainant.

To Messrs. BAKEWELL & CHRISTY,
Pittsburgh, Pa., Sol's for Defendants.

Service accepted.
Pittsburgh, Pa., Feb. 21st, 1872.

W. BAKEWELL,
For Respondents.

141 U. S. circuit court, northern district of Ohio.

JONATHAN L. BOOTH
vs.
GEORGE PARKS ET AL.

In pursuance of notice of taking of testimony in above action, hereto annexed, with admission of service thereof, before me on the 27th day of February, A. D. 1872, appeared Mr. Perkins, of counsel for the complainants, and on producing letters of respondents' solicitor, requesting that this examination be held open till February 28th, 1872, ordered that this examination be adjourned to February 28th, 1872, at 10 a. m. of that day, at the office of J. L. Booth, 81 Powers Block, Rochester, N. Y.

At the time and place to which this examination was adjourned as above, before me, appeared the parties, Mr. W. F. Cogswell for complainant, & Mr. T. H. Christy for respondent, and GEORGE J. WHITNEY being duly sworn, testifies as follows:

Interrogatory 1. Have you been a miller in Rochester and at Black Rock?

Ans. Yes, sir.

142 Int. 2. Was you so in 1860?

Ans. Yes, sir.

Int. 3. Did you have in use in either of your mills, and, if so, which, one of Mr. Booth's grain separators similar to plaintiff's model, Exhibit B, now shown you?

Ans. I had, I think, four like the model in the Frontier Mills at Black Rock.

Int. 4. State, if you please, how that worked as compared with device which you had used or known to be used theretofore for the same purpose.

(Objected to by respondents' counsel. The question of utility of complainant's alleged invention being a part of his case in chief, and not admissable in rebuttal.)

Ans. They worked better than any machine I ever used or have ever seen used in a mill for the separation of different kinds of grain.

Cross-examination by Mr. CHRISTY:

Cross 1. Were the four machines you speak of all put up at once, or some at one time and some at another?

Ans. I think two of them were put up first, and subsequently, but within a very short time, the other two.

143 Cross 2. What was the height of those machines?

Ans. I can't tell. I should guess from four and a half to five feet.

Cross 3. In the room or part of the building in which they were put up, what was the height of the ceiling above the floor?

Ans. I should say ten feet, possibly twelve; it was a pretty high story.

GEO. J. WHITNEY.

The defendant, with the consent of the plaintiff, introduced in evidence a certified copy of letters patent for an "improvement in grain separators," issued to J. L. Booth, dated September 20th, 1869, No. 25484.

Received and marked Exhibit Z.

NORTHERN DISTRICT OF NEW YORK,
Monroe County, ss:

I, John S. Morgan, do hereby certify that I am a notary public and commissioner in and for said Monroe County; that in accordance with the notice hereto annexed, the parties above mentioned appeared before me as above stated; that the said George J. Whitney being carefully examined and cautioned, and duly sworn to testify the truth, the
144 whole truth, and nothing but the truth, did testify as above stated; that said deposition was reduced to writing by me and read over to the said Whitney, and that he thereupon signed the same; that the said certified copy of said letters patent was received as stated; that I am not of counsel or attorney for either of the parties to the said suit, nor am I interested in the event thereof.

In witness whereof I have hereunto set my hand and notarial seal this 28th day of February, 1872.

[SEAL.]

JNO. S. MORGAN,
Notary Public and Commissioner.

144½ (Indorsed:) 2249. United States circuit court, northern district of Ohio. Jonathan L. Booth vs. George Parks et al. Testimony taken before Morgan, com'r. Filed M'ch 5, 1872. Earl. Bill, cl'k.

145 United States circuit court, northern district of Ohio.

JONATHAN L. BROOKS
vs.
TURNER, PARKS & CO.

Proofs for final hearing on the part of the def'ts in the above-entitled case, taken before me, Edward G. Thompson, standing examiner of the United States circuit court for the southern district of New York, at New York, in pursuance of notice hereto annexed, marked A, and by consent and stipulation of the respective counsel of both parties hereto.

NEW YORK, *April 1st*, 1875—11 o'clock a. m.

Present, Mr. Kerr, of counsel with defendants, and Mr. Jonathan L. Booth, plaintiff, in person.

JOHN HOLLINGSWORTH, witness produced on the part of the def'ts, being first duly sworn, in answer to interrogatories propounded to him by Mr. Kerr, says:

1. Q. What is your name, age, residence, and occupation?

A. John Hollingsworth; 60 years; I reside at 57 W. 11th st., New York; importer of bolting cloth.

146 2. Q. Have you had any experience in construction, use, and operation of fans for cleaning grain?

A. I have for many years.

3. Q. State your experience.

A. I was engaged in milling in Zanesville, Ohio, from 1844 till 1860, and after that in Phil. and New York, from 1860 to 1870. During this time I had occasion to use all sorts of devices for the purpose of cleaning grain, so as to have it in the best condition for graining. Consequently, in the course of my experience, I made a number of experiments with rolling screws, shaking and perforated iron riddles, fans, both blast and suction.

4. Q. What form of fan, considering the diameter with relation to the length of the fan, do you find it best fitted for cleaning purposes?

A. In a blast fan the width of the fan should never exceed the diameter to produce anything like a uniform current of air in the wind pipe.

5. Q. By width, what do you mean?

A. I mean by width the length of axis inside of the fan case, when the wings on said axis fill that space with the exception of a half an inch or an inch on each side, so that in revolving they will not touch the case.

6. Q. State the reasons for the rule laid down in your fourth answer.

A. My opinion is based upon the fact which I discovered by ex-
147 periment. I found with the fan, whose width is double its diameter, that the wheat coming from the wind pipe was cleaned better nearer the eyes, or openings of the fan than that coming from the center of the fan. I made a number of experiments and found that when the width was about the same as the diameter, or even 25 per cent. less, that the most uniform result was produced.

7. Q. Where is the fan supplied with air?

A. At central openings in the side of the fan case, called the eyes. Its discharge is at the skirts or circumference. The operation of a blast fan being to receive the air in at the eyes and discharge it out of the fan case at an opening in its circumference or skirts.

8. Q. Is a fan whose width exceeds its diameter in the ratio of 2 to 1 supplied with air in any other way?

A. I know of no way of supplying a fan with air excepting through the central openings or eyes of the fan case.

9. Q. Can a fan be supplied with air through the discharge opening through which the grain passes from the case?

A. Certainly not, the air blows out from every opening in the skirt or circumference of the fan case and any opening that is in the wind pipe connected with it.

10. Q. State whether in your opinion a fan whose width mater-
148 ially exceeds its diameter will effect a perfect separation of wheat and other lighter grain and substances accompanying it?

A. All other things being alike, it cannot make so perfect a separation as if the width was reduced to the same size as the diameter.

X-examined by pl'ff:

X 11. Q. Mr. Hollingsworth, have you ever appeared as an expert in any patent cases prior to this?

A. I have appeared as a witness, but not as an expert.

X 12. Q. Do you consider this testimony expert testimony?

A. If theoretical opinion based upon practical experiments which have come under my own cognizance is considered expert testimony, then I have given such testimony. I am not a professional expert.

X 13. Q. What is the best sized central opening to a fan case for grain cleaning?

A. I have generally found in my practice that the open eyes of the fan case should be from $\frac{1}{4}$ to $\frac{1}{3}$ of the diameter of the case. In order to govern or adjust the quantity of air that is admitted into the fan case there are slides over the eyes so arranged that they can be closed or drawn apart, thereby increasing or diminishing said openings as may be desired.

149 X 14. Q. What result follows the use of a fan and case 4 feet long and 2 feet diameter or thereabouts, so far as the effect upon the outgoing current is concerned?

A. If the opening of the outgoing current extends across the width of the fan case, the currents of air nearest to the eyes or central openings in the fan-case will be stronger than those from the middle of the opening.

X 15. Q. Would or would not this be the case in a fan & case 2 feet long and 2 feet diameter or thereabouts, provided with slide or shutters at the eyes for regulating the blast, supposing said slides to be one-half or two-thirds closed?

A. Not by any means to the same extent, so far as my personal experience goes. I have made many a test.

X 16. Q. The unevenness of the outward current from a wide or a 4 foot fan is more or less effected by the size of the opening at the eye?

A. No; I don't think it is very much affected by the size of the opening at the eye.

X 17. Q. How do you account for it, then? I mean the inequality of the current alluded to in your examination.

A. I judge of the results from facts which I observed in experimenting.

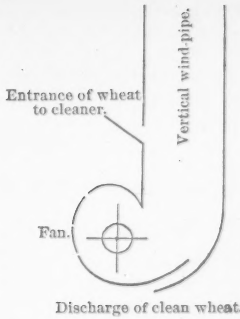
150 In separating wheat with a blast-fan whose width was greater than its diameter, I found the pile of wheat falling from the wind-pipe a little greater in the center and a little less at the ends, showing that the currents of air drew more out at the ends and less at the center; consequently I infer that in fans of that construction whose width is greater than its diameter, that the current discharged from the openings of the fan-case must be stronger nearer the openings or eyes of the fan than in the center.

X 18. Q. Have you ever had any experience with such fans where vertical tubes were extended from them for the separation of grain?

A. Yes; if you mean vertical wind pipes.

X 19. Q. Does it make any special difference how and where the grain is introduced to the action of the air current in said wind-pipe, so far as the uneven action of the blast referred to is concerned?

A. I can only answer that by stating what I have done, and spoken of in answer 7. The grain in that experiment was fed into a vertical wind-pipe which was connected with the discharge-opening of the fan-case ust above said opening—some 5 or 6 inches as well as I remember—ike this diagram.



151 And the result was as stated.

X 20. Q. How was the grain fed into the entrance; all on one side, or how?

A. Distributed by guides uniformly in a thin sheet.

X 21. Q. From your experience, what would be the result if the volume passing in at one side of the width of the supply opening was double the thickness or bulk of that at the opposite side?

(Question objected to because the witness is produced to testify as to actual experience and not as a theoretical expert on all questions arising in the cleaning of grain.)

A. I have never tried anything of the kind, always considering it necessary that grain should be delivered in a uniformly distributed sheet, for it seemed to me that the larger the masses of grain thrown over a given space the less would be the ability of any fan to make a separation.

X 22. Q. From your experience and judgment then, as stated, would or would you not increase the volume of air according to the bulk of grain admitted to it?

A. I have said I would never deliver wheat into an air-pipe except in a thin distributive condition, and if I had to deliver into larger quantities, which I never did, my opinion is that I would regulate the
152 blast so that it would carry out only the lighter impurities and not the heavy good grain.

X 23. Q. How many bushels per hour can you clean well through a vertical trunk or spout 12 inches square?

(Question objected to as not proper.)

X-examination:

A. I depends on the condition of the wheat. It may have a great many impurities, and may not, and consequently must be cleaned slower or faster.

X 24. Q. In cleaning slower or faster do you or do you not put on or shut off the wind accordingly?

A. I would regulate the blast by opening or closing the eyes of the fan so as to carry over just what particles I desired to separate from the wheat. I cannot give you any more correct answer than what I have stated.

X 25. Q. From your experience in the use of vertical blast tubes you would say then, would you not, that where a machine is regulated so as to just nicely clean the wheat without objectionable waste with a certain amount of uniform feed, that you suddenly check one-half of the volume

of grain passing into the machine, that no more waste of good wheat will occur than with the heavy feed as before mentioned, everything else being equal?

153 A. No, I don't say so. I believe I said that I would regulate the blast with the feed so as to carry out the light impurities and not the heavy wheat.

JOHN HOLLINGSWORTH.

Sworn and subscribed to this 1st day of April, 1875.

E. G. THOMPSON,
Examiner U. S. C. C. Southern Dist. of New York.

Adjourned to April 2, 1875, at 9½ a. m., by consent.
Adjourned to April 2, 1875, at 9½ a. m., by consent.

NEW YORK, *April* 2, '75—9½ a. m.

Met pursuant to adjournment.
Present, counsel as before.

NEW YORK, *April* 2, 1875—9.30 a. m.

And the witness, JOHN HOLLINGSWORTH, being recalled by Mr. Kerr, says:

1. Q. State whether the large pile at the middle of the discharge opening for cleaned wheat of the wind-pipe was composed of clean wheat.

A. There were more light materials in the center than at ends,
154 more cheat in the central portion than in the ends.

And being cross-examined by Mr. BOOTH:

2. X Q. When was this experiment tried that you had reference to?

A. In the Putnam mills, Zanesville, Ohio, just before I got out my patent for a "separating glass pan," somewhere about 1851.

3. X Q. How long was the fan inside the eyes?

A. I tried several fans. As well as I remember the fan was somewheres about 30 to 36 inches in diameter, and in width it was about the width of the chambers—about 40 to 48 inches wide.

4. X Q. How wide was the vertical upright spout?

A. It was 8 or ten inches, the first spout, and the width of the fan. I think the spout was about 3 feet high.

5. X Q. Did that spout terminate abruptly or with a curvature?

A. With a curvature.

6. X Q. Had it any means for intermission, so that more than one quality of screenings were obtained?

A. There was not. It discharged what was blown up through an opening at the top of the wind-pipe into a hopper.

7. X Q. Was there any concentration of the clean grain after its exit from the separator?

155 A. At first there was not; it dropped on the floor. Afterwards I discharged it into a conveyor, and thence into the stone guns.

8. X Q. What size were the eye openings, as near you can remember?

A. About one-third of the diameter of the fan, with shoulders to regulate it.

9. X Q. Did you try that experiment with the eyes two-thirds of the diameter of the fan?

(Objected to as not being cross-examination.)

A. They may possibly have been two-thirds. I cannot recollect. I think, about one third of the diameter.

JOHN HOLLINGSWORTH.

Subscribed and sworn to before me the 1st day of April, 1875.

E. G. THOMPSON,
Examiner U. S. C. C., S. D. N. Y.

THOMAS W. BAXTER, witness produced on the part of the def'ts, being first duly sworn, in answer to interrogatories propounded to him by Mr. Kerr, says:

1. Q. What is your name, age, residence, and occupation?

A. Thomas W. Baxter; I am 44 years of age; I reside 57 West 11th street; I am in the employ of H. W. Johns.

2. Q. State whether you have had any experience in reference to grain machinery.

156 A. I have had considerable.

3. Q. State what experience.

A. An experience since about 1855 in the mill furnishing business.

4. Q. Just enlarge on that, if you please.

A. The general nature of the mill-furnishing business included the dealing in and selling of all machinery requisite in running of mills, but the particular branch which I mostly confined my business to was that of supplying flouring and grist mills.

5. Q. State whether you are acquainted with the Vaughn separator.

A. I presume you have reference to the Vaughn zigzag separator. If so, yes, intimately.

6. Q. What acquaintance?

A. In the selling of and having repeatedly seen it run.

7. Q. In selling the Vaughn separator, have you had occasion to talk with millers on the subject?

(Objected to by Mr. Booth.)

A. Yes, sir, repeatedly.

8. Q. What was the nature of your communications?

157 A. The general subject of conversation with millers when the Vaughn zigzag was under discussion related to that principally, but usually included grain-cleaning machinery generally.

9. Q. State whether it was a saleable machine.

A. Very, after once being known.

10. Q. In what consisted its merits?

A. The great advantages it possessed generally over any other machine that I knew of in cleaning wheat, spring wheat particularly. One of the main features was the perfect manner or nearly so of removing oats, the next was the great convenience with which the zigzag riddles could be cared for and kept clean, which was necessary, as the sticks, rosebuds, or seeds and other impurities which tended to clog the riddles required to be the case when finely punched riddles are used. Another advantage was the convenient manner in which the oats and other offal from the riddles was taken care of, and could be conveniently spouted together for collection. Another advantage was its construction so that the cockle-riddle was easily taken care of, and so it was easy to make its use efficient, it being requisite to clean the cockle riddle of the smaller wheat which would lodge in the opening by rubbing the under

158 surface, and so force the smaller kernals of wheat back, leaving the openings free to do their office of discharging the cockle while passing over the upper surface. All of these advantages, when pre-

sented in connection with the short fan, left it comparatively easy to make sale of the machine as against competing ones.

11. Q. What arrangement of the fan, with reference to the other parts of the machine, permitted the use of the short fan and the other advantages you have mentioned?

A. The fan stood at right angles to the length of the machine and standing at one end. This arrangement permitting the fan-spout to be extended up at the end of the machine, and with the enlargement in it allowing two grades of separation, its location not interfering with the operation or care of any other part of the machine.

12. Q. State what was the general purpose of the Vaughn machine.

A. As I have already stated, the general purpose of the machine was cleaning grain, but one of its noticeable features was the removing oats from spring wheat.

13. Q. Did you know of any prior machinery for removing oats from wheat?

A. I know of some by hearing, and some I had seen.

14. Q. State whether such machinery was efficient for that purpose.

159 A. Comparatively so.

15. Q. Upon what does the efficient separation of oats from wheat specially depend?

A. The result of my experience is, that it mainly depends upon requisite surface, even and flat distribution of the grain, exactness in the proper size of the holes, and a rapid, tremulous motion, so adjusted as to prevent a jar on the riddles.

16. Q. In what particular direction should this motion be communicated to the screens with relation to the passage of the grain, to obtain its most efficient action, and to guard against the liability to jar, mentioned in your last answer?

A. My experience convinces me that the conditions being equally provided for that are named in my last answer, in addition to the riddles being kept level lengthwise, I know of no difference in the results, but where the shake imparted to the riddle is at right angles to the passage of the grain, and the riddle is not level or receives a jar in the motion imparted to it, the tendency is to induce the grain towards either one or the other ends of the riddle, or towards the strengthening bar or bars interposed between said ends, and so prevents an even distribution of the grain and causes the grain to gather unequally on the surface, and therefore is discharged over the riddle instead of through the

160 holes, and prevents the separation that would otherwise take place. For this reason I am led to know that what I may term a fore and aft motion, or the reverse of the motion before described, is a better one.

17. Q. Suppose this jar occurred in connection with this fore and aft motion; is the effect as deleterious?

A. It is not, for the reason that the want of level lengthwise of the riddle does not effect the even distribution of the grain on the riddles to anything like the same extent, the operation being so rapid, as it does when the reverse motion is applied, and the main difficulty existing is the dancing of the grain produced by the jar, which in either case would have to be contended against, providing the jar existed.

18. Q. How large was the largest Vaughn machine of which you had knowledge?

A. It is so long since I sold the machines that I am unable to state positively, but my impression is one intended to clean one hundred and

twenty-five bushels an hour, which I never believed to be so successful in its operation as those of a smaller size, for the reason that where so rapid a motion is imparted to a heavy body the results are not so successful, because of the difficulty in preventing the riddles from jarring.

161 19. Q. What was the smallest size of the Vaughn machine, as near as you can remember?

A. Only intended to clean 30 bushels an hour, I think.

20. Q. Was there any material increase of the width of the fan of the large size machines over the small size machines?

A. My impression is that there was no great difference in the width of the fan, and my impression also is that there was some difference in the diameter of the fans, but I do not feel sure on either of these points; but in relation to the width I can inform you better by referring to one of my catalognes, which I will do if you desire it. By referring to my catalogue I find that the width of number 2 and No. 3 machines, the capacity of which were respectively 40 and 70 bushels an hour, were the same in width, and that therefore from the construction of the machines the fans were of the same length, but that on No. 4 machine of a capacity of 100 to 120 bushels was seven inches wider, which undoubtedly left the fan longer, and I am now more firm in my conviction as to its increased diameter, and which accounts for my impression in the previous part of this answer. It is proper to say that the catalogue does not mention the diameter of any of the fans.

21. Q. How is the size of the machines increased?

A. By the length of the riddles. On the No. 3 and 4 machines the width of the riddles were alike, but the lengths varied; and on

162 the No. 4 machine the riddles were both wider and longer. By length I mean the elongation of the riddle at right angles to the spout of the wind trunk.

22. Q. What was the relative increase of length and width of the No. 4 machines?

A. The No. 3 machine was 3 feet 2 inches wide by 4 feet 10 inches long, and the No. 4 machine was 3 feet 9 inches wide by 6 feet 8 inches long.

23. Q. Look at ex't "Booth original," which is a certified copy of complainant's original patent, and state whether you understand the construction of this machine shown in the drawings.

A. I do, generally.

24. Q. State what, in your opinion, would be the effect of the operation of the long fan G, as tending along the full length of the machine upon the grain fed into the spout H?

(Objected to, unless the witness has seen one of the machines described in said patent in operation.)

A. A partial separation of the lighter particles.

25. Q. State your reason for thinking so.

A. For the reason that I have seen one of the machines in operation, but whether the length of the fan in the machine was the same proportion in length as exhibited in his drawing I cannot say; but the

163 machine which I saw in operation discharged its separations in a very unequal manner, leaving the quantities at either end very much greater than as they approached the center of the fan case.

26. Q. What is the effect of the operation of a fan whose width exceeds materially the diameter upon grain in cleaning operations generally?

A. Its operation is to prevent a separation upon the matter subjected to it as the center is approached?

27. Q. Why is this?

A. From the fact that the blast fan can only be supplied with air from its ends.

28. Q. How does this cause the imperfect result spoken of by you?

A. For the reason that the separation would take place from the action of the air, and its absence prevents the accomplishment of the object.

29. Q. Does the air reach the middle of such a fan lengthwise?

A. As the length is increased the difficulty becomes greater.

30. Q. What would be the effect, in your opinion, of the use of the Booth machine, as shown in the exhibit, without spouts or troughs E to catch the droppings from the screens and discharge the same at the ends of the machine?

164 A. Very great difficulty in its care and in running.

31. Q. Describe the reason for the difficulty.

A. On one side, or that next to the wind spout, the offal from the screens discharging on that side would lodge on the top of the wind spout and accumulate, either so as to interfere with the operation of the riddles or fall down on either side of the wind spout at one end, interfering with the belt which drives the fan, and at either end dropping over the sides, allowing the dust to be drawn in at the ends of the fan-case, and so forcing it on to the grain, passing through within the spout, and in any event making it very objectionable for its use in a mill. On the other sides of the riddles it would pass on to the flour, as shown in the drawing.

32. Q. State whether, in your opinion, the presence of the trough E, the same having a shake motion in connection with the screens and boxes B and C, is in any way objectionable.

A. It adds to the weight of the body to be shaken.

33. Q. What is the effect of shaking the weighty body?

A. The effect I have already described, as interfering with the successful operation of the Vaughn No. 4 machine.

34. Q. State whether in the Booth machine shown in the ex-
165 hibit all the screws can be got at for cleaning purposes.

A. None of those on the side next to the wind-spout can be got at conveniently—the lower ones especially—and as all riddles, especially those intended for separating oats, require more or less attention and care in keeping the holes free, that much of the advantage to be gained in the use of the riddles would be destroyed, from the known unwillingness of millers to increase their duties.

35. Q. State whether it is desirable or important to clean a cockle riddle in a grain separator.

A. It is necessary if you wish to extract the cockle.

36. Q. State whether in the machine shown in the Exh. "Booth Original" the cockle riddle is accessible for cleaning purposes.

(Objected to on the ground that the drawings without the model is incompetent, and all the questions propounded to this witness heretofore on these drawings without the model objected to on the same ground.)

A. I see no opportunity of doing so, if I read the drawing correctly.

37. Q. State whether this machine contains the arrangement of elements which gave to the Vaughn machine its value as a useful and saleable machine.

166 A. By no means.

38. Q. State whether in the Booth machine, as shown by the

exhibit, the operation of the screens is complete at the time the grain is discharged into the spout H.

A. The operation of the screens is complete and the separation due to the action of the screens is likewise so.

39. Q. State whether or not you are the defendant in a suit in the southern district of New York brought by this complainant under this patent.

A. I am.

And being cross-examined by Mr. BOOTH:

40. X Q. Where did your first acquaintance with grain business begin, and when?

A. In Chicago, in the winter of 1855–1856.

41. X Q. How long have you known Mr. Hallingsworth, who testified in this case?

A. It will be 5 years next May.

42. X Q. Where did he reside when you knew him first?

(Objected to as not proper cross-examination.)

A. In the same house where we now board and have ever since.

43. X Q. Are you interested in the result of this suit in any way?

A. No.

44. X Q. You say you are defendant in another suit brought by
167 Booth the plaintiff in this case for the alleged infringement of said Booth's patent, referred to in this case, by the sale of a Vaughn machine on which you have just given your testimony.

(Objected to as an incorrect statement of the witness' answer.)

A. I am the defendant, but the details of the case I cannot state, as Turner, Parks & Co. assume the defence.

45. X Q. Did you not sign a stipulation in that suit, or did not your attorney, whereby you agreed to be governed by the results of a trial of the case of Booth vs. Turner, Parks & Co.?

A. I never did, nor did I ever authorize any one to do it for me, nor did I ever know that such a stipulation had been made, until the printed copy of it was shown to me by Mr. Kerr after the above question was commenced to be asked.

46. X Q. Did you not sign an answer to the complaint in a cause of Booth against Baxter, dinying an infringement and made oath to the same, 28th March, 1872?

A. I evidently did, from this printed copy and of which I have no doubt now; but as is often the case, I regarded it as of but minor importance, as Turner, Parks & Co. had assumed the defense and years ago had promised to protect me.

47. X Q. Was that promise in writing?

A. My impression is that it is, but I cannot say, and if in exis-
168 tence, it is among business papers in Chicago; but in any event their promise is sufficient.

48. X Q. At what date or about what time in your opinion did this obligation commence?

A. At about the time a raid was made on the millers in Chicago by this complainant.

49. X Q. Mr. Baxter, what time did that raid commence?

A. I can't state distinctly, but I think in 1862; however, the records of the circuit court of the northern district of Illinois will furnish the information.

50. X Q. When was your first acquaintance in any manner with the Booth separator?

A. I remember of a Booth zigzag separator being exhibited at the board of trade rooms in Chicago; what year that was in I can't remember; either in 1860 or 1861.

51. X Q. Was Booth there?

A. I can't say that of my own knowledge, but I think he was; that is, I was told so.

52. X Q. Where did your first acquaintance first take place with James A. Vaughn and his zigzag separator?

A. I should say, without pretending to state particularly, that it must have been some time in 1857 that I became acquainted with James A. Vaughn and that I knew of the machine he proposed patenting some time before its issuance.

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53. X Q. Had you any of Vaughn's zigzag separators on sale in your establishment in Chicago in January, 1860?

A. I wouldn't pretend to say positively, as I have no means here of refreshing my recollection, but my impression is, from the date of his patent, that such must have been the case.

54. X Q. On what ground do you base that conclusion, so far as the date of the patent aids you?

A. My recollection is that his patent was issued in April, 1861, and that for a long while previous there had been many discussions and interviews between Mr. Turner, Mr. Vaughn, and myself in regard to the subject, and this helps me to fix the time. In addition to that, my recollection is that the application for the patent had been delayed by these discussions, and that further time was consumed by consultations with Mr. Stoughton, at Washington, who secured the patent, upon the subject.

55. X Q. In your allusion to the winter of 1860, as you say it probably was you saw the Booth machine at the board of trade, do you not refer to the winter of 1859–1860 instead of 1860–1 61?

A. As I have already stated, I am unable to fix the time when I saw the Booth zigzag separator at the Board of Trade Rooms. My only recollection is that having been an early member of the Board of Trade of Chicago, and having made myself prominent on the subject of cleaning grain, a number called my attention to the fact that a competing machine, with which I was not connected, was in the field. I can think of nothing more which serves to fix my recollection as to the date.

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56. X Q. You are sure, are you, that you had the Vaughn zigzag machine on sale and in your hands for sale prior to the time that you first saw said Booth machine referred to?

A. I would not so state positively, but my best impression is that such is the fact.

57. X Q. When did you first see a Vaughn zigzag separator in operation—the first that you ever did see one?

A. I could not state positively whether it was at their shop at Cuyahoga Falls or whether it was at one of the mills in Chicago in which I caused it to be set up, or if in the latter, in which particular mill I cannot name. These Vaughn zigzag separators were set up in the mills of Gage & Hains, Pomeroy's, Adams', Lake Street Mills; I think in some others, but I don't remember them.

58. X Q. Were you the agent of Turner, Parks & Co., and did you represent them in Chicago and in the West for the introduction and sale of the Vaughn zigzag separator manufactured by them?

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A. I can hardly answer whether I acted as their agent or not. There

never was any written agreement between us upon that subject. My early acquaintance—in the fall of 1856, as I think—with Mr. Turner led me to take an interest in him and have confidence in his superior intelligence beyond those with whom I had become acquainted as connected with the manufacture of grain cleaning machinery, and my relations with him and the other members of the firm that I am acquainted with have continued to the present time to be of a very friendly character. In those days the subject of cleaning grain in the West was little understood or appreciated by the milling community, and, seeing the necessity of a radical change in the manner of cleaning grain, I, with the firm, became enlisted in the cause, and believing that their efforts would be successful in producing proper machines, I heartily aided them; and so I frequently visited Cayahoga Falls, and they visited me in Chicago, to assist in the enterprise. In view of these considerations, they promised me the control of the West in the sale of their grain-cleaning machinery.

59. X Q. Did you learn from Mr. Turner, during your first ac-
172 quaintance with him, that he had been the travelling agent and salesman of grain separators of a different construction to the zigzag separator referred to, and for many years prior thereto had been so engaged?

(Objected to as no proper cross-examination.)

A. I was informed by Mr. Turner some time after our first acquaintance—perhaps within two years—that he had been connected with Mr. Booth in some capacity in the sale of separators made by Mr. Booth?

60. X Q. Will you refer to your catalogue, page 58, and state what machine is there represented, by whom manufactured, and by whom sold?

(Objected to as not proper cross-examination and the introduction of new and immaterial matter.)

A. The Turner and Vaughn warehouse or receiving separator, manufactured by Turner, Parks & Co., and sold by me.)

61. X Q. State whether that machine was a machine for the separation of offal from grain, and, if so, was it a good machine for that purpose?

(Same objections.)

A. A very good one.

62. X Q. Please give, from the table of sizes, the length of the fans in the machines and corresponding diameters with the fan cases.

(Same objections.)

173 A. The diameters of the fans are not stated in the catalogue, and I cannot give them. The lengths of the fans in the No. 2 machine would be about 20 inches, No. 3 machine would be about 25 inches, and the number 4 machine about 30 inches, on the No. 5 machine about 40 inches, on the No. 6 machine about 50 inches.

I would say, in explanation to the 1st part of my answer, that the machine was a very good one and very efficient in its operation, and that we sold a large number of them, but that *their* was a limit to their capacity, only regulated by their width, as we found that on the number 5 and more especially on No. 6 we could not make the proper separation, by reason of not being enabled to supply the blast-fans with sufficient air towards their centers to produce the separation.

(All the answer objected to after the paragraph commencing "I would say in explanation" to the end of the answer as irresponsive, and as the witness had previously stated without qualification that said machine was a good and effectual machine.)

63. X Q. Please to give the heigths of those machines as represented in your catalogue.

(Same objection.)

A. No. 2, 4 feet 3 inches.
No. 3, 5 " 3 inches.
No. 4, 5 " 11 "
No. 5, 6 " 9 "

174 No. 6, 6 feet 11 inches.

64. X Q. Now state from the cut representation before you, by measurement, the relative diameter of the fan cases to the height of the machine as represented in the cut.

(Same objection.)

A. I can't do it from that cut, and I have nothing else to refresh my memory.

65. X Q. Refer to No. 5, which is 5 feet 7 inches high, as you say, and 40 inches in length of fan case. Is the fan and case of that machine 40 inches in diameter, in your opinion?

(Same objection.)

A. I should say not.

66. X Q. Is it one-half its height of 5 feet 7 inches?

A. I should say not.

67. X Q. You have spoken of Mr. Stoughton, of Washington. Who is he, and what is his business?

A. A patent solicitor.

68. X Q. Did you have personally any communication with him about the Vaughn zigzag machine and its patent?

A. My impression is that I have had several interviews with him.

69. X Q. In your allusion to Mr. Stoughton as connected with the delay in the issuance of Vaughn's patent, did you have a personal communication with him upon the subject?

A. That is my recollection.

175 70. X Q. Why were you interested in the issuance of the patent?

A. To preserve my interest for the time and trouble I had expended and intended to expend in the sale of the machines.

71. X Q. How did you expect to be remunerated?

A. By the profits on the sale of the machines.

72. X Q. Did Booth place his machines in the Chicago market for sale by any person that you know?

(Objected to as immaterial.)

A. I was informed that they were for sale by Wm. F. Noye, but that the machines offered for sale by said Noye as Booth's zigzag separators were not made according to Booth's patent for that machine.

73. X Q. Who was Wm. F. Noye, and what was his business?

A. Wm. F. Noye was reputed to be the brother of John T. Noye, of Buffalo, and his business, as I understand it, was the representative of his brother, whose business was that of a mill furnisher, and that W. F. Noye had a sample room in Chicago.

74. X Q. When did you first learn that said separators on sale by Noyes was unlike the patent by Booth, and how did you learn it?

176 A. I presume, likely, shortly after it came into his possession, and through one of my own men whom I sent to examine it, and who reported its construction.

75. X Q. About what year was that, to the best of your recollection?

A. The year I cannot state, but should think it was 1860 or 1861.

This point, however, can be better determined by year shipment, as I have no doubt I learnt of it very soon after its arrival.

76. X Q. Was the description of this machine as described by you also a description of the machine that you saw at the board of trade room buildings in Chicago, previously referred to?

A. I should say yes, in its general features.

77. X Q. How did you ascertain that it was unlike the original patent issued to Booth?

A. From the description which was given to me of the machine at Noye, and the cursory examination which I made of the machine at the board of trade rooms as compared with the machine described in Booth's patent.

78. X Q. Where did you obtain a description of Booth's machine, as referred to in his patent?

A. From a copy of the specification and drawings of his patent, and after having made an examination of the same.

177 79. X Q. With reference to the time you made this examination, what was the time before or after which you saw one of Booth's machines in operation, as referred to by you, and which was as you say made with the objectionable long fan?

A. My recollection is that it was after I had seen the machine in operation that I saw a copy of his patent.

80. X Q. Where did you see said machine in operation?

A. I have been considering the matter since giving my testimony during the previous part of the day, and my first impression was that it was at Sanderson's mill in Milwaukee, but since then I have been undetermined whether it was there or at Rochester, or at Black Rock, New York; and I am now unable to say at which place it was.

81. X Q. Do you say that you did see the machine referred to in the original patent of Booth, and saw it in operation?

A. That is my impression, and is so fixed in my mind, that being unable now to positively fix where it was that I saw this machine, I would not state decidedly.

82. X Q. Can you describe the operation of the machine as you saw it as regards the attachment of belts for running the same, as regards the delivery of the offal, such as screenings, oats, or droppings from the sieves; the arrangement on the cockle sieve, and as regards

178 the dropping of oats, and from the sieves falling and being drawn into the fan case as referred to by you in your description of the same, and pointing out the objectionable features by the aid of the drawing attached to the letters patent which you have previously used for that purpose?

A. I have no particular recollection about the belts, nor have I any particular recollection that the dust falling from the oat trough was drawn into the ends of the fan case; and my recollection is, that as to the test of the separations from the fan, that the jacket or bonnet connecting with the wind spout was removed or arranged in such a way that the impression is left upon my mind that the results previously described were obtained.

83. X Q. What was the size of the machine and its general build; how wide were the sieves; how long was the fan?

A. To give the particular dimensions of the machine, I would not pretend, but I should think from 5 feet to 5½ feet long, by from 2 feet to 2½ feet wide; and in relation to the length of the fan I could not state, as I did not examine the distance from the fan to the ends of the case.

84. X Q. How do you know, then, that the fan was what you term the long fan?

A. I have no means of knowing, except from the disproportion in the amount of the screenings.

85. X Q. Where were they the largest? How was that manifested?

179 A. By the largest proportion being towards the ends.

86. X Q. You are sure that was the result of your inspection of the operation of the machine, are you?

A. That is my recollection of it now.

87. X Q. Can you give the relative proportion (about) of the length of the sieves and the length of the fan?

A. I could not, excepting that the separations approaching towards the ends were what would be considered fair, and the balance what would be expected to be delivered from the upper spout, but, of course, were not alke.

88. X Q. And still you can't say where this machine was?

A. As already stated, I cannot.

89. X Q. What did you observe with reference to the opportunities of cleaning the cockle-sieves in your objectionable delineation of Booth's machine?

(Objected to because the witness in testifying made reference to the patent itself, and not to any particula machine which may or may not have been constructed in accordance with it.)

A. I discovered no way in which it could be done.

90. X Q. Did you discover any way in which it could not be done?

A. I did, as if the machine belonged to me, I could have
180 it taken apart.

91. X Q. You say that in the cockle-sieve of the Vaughn zig-zag machine, the cockle sieve was so exposed that it could be easily cleared of the obstructions which filled the perforations; was it not so precisely in the Booth original machine which you saw in operation at Rochester, or Black Rock, or wherever it was that you did see it in operation, or is it not so exposed by the representations in the drawings from which you have described the cockle-sieve?

A. I did so state in relation to the Vaughn machine, and my recollection is as I have before stated, that I discovered no way by which the cockle sieve on the Booth machine could be conveniently cleaned, and am I fortified in this opinion by my recollection of having seen Booth's machines subsequently open to the same objection, and by referring to the drawings again which are not full; but in accordance with my recollection of the machine, I see no means by which the cockle can be cleaned from the underside, as I read the letter C to represent a board under the middle.

92. X Q. What evidence have you that Booth's original patent had a long fan?

A. From the description contained in the drawing of the patent before me, which I presume to be, as is usual, drawn to a scale; and in
181 looking at the end and side views I can come to no other conclusion as to its arrangement.

93. X Q. What idea do the drawings give you as to the probable length of the fan, or can you say whether or not the fan is two feet or four feet in length?

A. I cannot give dimensions as no scale is indicated, but the length of the fan appears to be about three to 1 of its diameter.

94. X Q. Is the whole length of the fan shown in those drawings or only a sectional view of its length?

A. No, sir; the whole length of the fan is not shown, but the case is cut away at one end to show the position of the fan, and presuming that the fan stands centrally with the riddle, my previous answer would be correct.

95. X Q. You say that one great advantage of Vaughn's zigzag separator over Booth's original patent was the more ready appurtinity of cleaning the sieves. How do you know that Vaughn was the discoverer of that peculiar difference?

(Objected to because the witness has testified to a feature which existed in the Vaughn machine, of which he says existed to a greater degree, and has not laid foundation to the inference drawn in the question.)

A. I have no knowledge on the subject except that he is the
182 patentee of such arrangement.

96. X Q. You say that he is the patentee of the arrangement whereby the sieves are exposed to a ready cleaning. What do you mean by the ready cleaning?

A. I say that as I understand it, that he is the patentee of a machine so arranged as to effect this object.

97. X Q. How did you learn that he was the patentee, and when?

(Objected to as immaterial, and because the Vaughn patent or patents are the best evidence of what he patented.)

A. By reading a copy of his patent, which I presume was shortly after being issued.

98. X Q. You visited Washington, did you not, soon after the issuance of the Booth and Vaughn original patents, and made a thorough examination of the patents, drawings, and models?

(Objected to as not cross-examination.)

A. I don't think I visited Washington until some short time previous to the issuance of the Vaughan patent, and undoubtedly aided in an examination of the drawings, specifications, and models of competing machines, as my object was to learn whether a valid patent could be obtained, as otherwise I could not be benefitted.

183 99. X Q. Had not Mr. Vaughn applied for a patent at Washington while you were in Washington?

(Same objection.)

A. My impression is that he had, but I don't know. I think I was there more than once.

100. X Q. Had you the Vaughn machine on sale in Chicago before you went to Washington?

A. I can't remember.

101. X Q. Did you not interpose obstructions to the ready sale of the machines, as sold by William F. Noye, of Chicago?

(Objected to as immaterial and inadmissible.)

A. I did to the best of my ability, not only on account of its objectionable features, but as an infringement on the Vaughn machine.

102. X Q. Did you not go to Milwaukee and attack the same machine, as sold by Noye, by threatening to prosecute the several millers of that place who were then using the Booth machine? And did you not threaten to prosecute one Groff, an agent of Booth at Milwaukee, who was selling machines in Wisconsin? Did you not warn other
184 parties at Janesville, Wisconsin, one Southerland, a millwright; one R. Mix, of Aurora, Illinois; also Hunt & Glass, of Racine, Wisconsin, and others generally?

A. I have no particular remembrance of going to Milwaukee for that purpose, nor of suing Groff, but it is more than likely that I did so, as I visited some of the places named, and a great many others not named in the question for the purpose of warning millers that the machine then constructed by Booth, as described to me as being sold by Noye, were not according to Booth's patent, but were an infringement on Vaughn rights, and that Turner, Park & Co. promised to prosecute them. As to Brush Sutherland, I feel positive that I did not see him at Janesville, for my present recollection is that I first met him at my place in Chicago, where he made application for employment, and he was subsequently in my employ for about seven years when I discharged him. I have a distinct recollection of visiting Racine, Wisconsin, and meeting either Mr. Hart or Mr. Glass, when we had a full discussion of the subject of zigzag separators, and, at the expiration of the interview, thanked Mr. Turner, who was with me, as well as myself for the information we had given them and saving them from loss, for the reason that Mr. Booth had sold them a license on the representation that
185 a model shown by him to them was a representation of that covered by his patent, and that now they had become aware of the deception.

(That part of the answer which relates to what Mr. Hart or Mr. Glass said to Mr. Baxter is objected as irresponsive.)

103. X Q. Did you, when at Washington, see the model of Vaughn's machine as patented by him, and if so, were not the sides of the machine completely incased, obstructing all access to the sieves, and are they not so obstructed the drawings attached to defendants' Exh. 10, now shown you?

(Objected to as immaterial.)

A. I have no recollection of having seen the model in Washington such as described, nor at any other place, nor have I ever heard of the construction of a Vaughn zigzag in such a manner, and upon looking at the drawings in Exhibit 10, my attention is now first called to a line outside of the upper portion of the machine as seen in the end view and which I cannot explain.

Adjourn to April 3, 1875, 10 a. m., by consent.

BOOTH
vs.
TURNER, PARKS & Co.

186 NEW YORK, *April* 3, 1875—10 a. m.

Met pursuant to adjournment.

Present, counsel as before.

And the witness Baxter being further cross-examined by Mr. BOOTH, says:

104. X Q. I wish you would refer to Exh. No. 10, the Vaughn patent, and see if you can refresh your memory as to the date of the issuance of the original patent.

A. The date of the original patent appears to be April 24, 1860.

105. X Q. Please to refer to patent Exh. Booth's Original, and look at the drawings of said patent, and now state if the sieves of that machine so represented represent a machine with sieves 6 feet in length and a fan four feet in length, and if said combination was cut in two in the center at right angles to their lengths, if said machine would not be the sieves 3 feet long and the fan two feet long?

A. I suppose it would be so.

106. X Q. Would that be a machine containing a fan, such as you would term a short fan?

A. That would be a machine having a fan much shorter at one end than the other.

187 107. X Q. If a fan 4 feet in length cut in two transversely and at its precise center in its extreme ends, would that not be a fan two feet in length?

A. I should say there was but little risk in affirming this.

108. X Q. Up to the time from your experience of the original patent of Vaughn, have there not been fans used for cleaning grain not longer than two feet in length?

(Objected to as immaterial.)

A. I presume so.

109. X Q. Had you not sold such machines?

A. Yes.

110. X Q. You do not consider, then, a fan two feet in length and two feet in diameter a disproportioned fan for cleaning grain, do you?

A. I do not.

111. X Q. Your objection, then, to the long featured fan in Booth's original arrangement, so far as the fan is concerned, could be removed, would they not, if made two feet long?

A. Very easily. But the objection in doing so would make the machine too expensive and its form too inconvenient for use, and the objection which I have raised to Booth's machine was on account of their construction, and not as to his right to make them.

188 (All the answer objected to by Mr. Booth as irresponsive, except the words "very easily.")

112. X Q. Have you not made special objection to the construction of a long fan as originally made by Booth on account of its imperfect manner of cleaning grain, and was it not entirely irrespective of its location in said machine?

A. I have repeatedly made objections to the fans in Booth's machines as originally made by him, but when the machine was made so as to infringe Vaughn's patent the machine was not open to the same objection, nor have I ever so stated it.

(Answer objected to as entirely irresponsive.)

113. X Q. X-question 112 repeated.

A. I don't see how to vary my answer. I understood that to be a proper answer to the question.

114. X Q. Have you not stated from your experience in grain cleaning that you had found long fans objectionable on account of the inequality of the work performed, and didn't you state that machines with long fans sold by you had proved so?

A. I did.

189 115. X Q. How long were those fans?

A. One which I have in particular remembrance now was from four to five feet long, and the diameters were from 24 to 30 inches.

117. X Q. When and how many of these machines were sold?

A. Four, I think, in Chicago.

118. X Q. To whom?

A. Munn & Scott.

119. X Q. Did you sell the 4 machines at one sale or did you sell one first?

(Objected to as inadmissible.)

A. My recollection is that the four were ordered at one time.

120. X Q. You sold other similar machines, or of the same manufacture, to other parties in Chicago and for the same purpose as used by Munn & Scott?

A. We took orders and made sales of several machines of the same construction and of various sizes; the names of the parties, when sold or when orders were taken for them, or what the dimensions of the machines were, I cannot state without referring to my business books or or papers which are not here, and which I have not seen for six
190 years, since which time I have devoted no attention to my business in Chicago, personally.

121. X Q. What was the nature of the business of Sturgiss, Buckingham & Co., of Chicago, Hiram Wheeler, C. W. Wheeler & Co., Whitney & Woodruff, C. E. Olmsted & Co., Munn & Scott, in Chicago, on February 11th, 1865?

A. Whitney & Woodruff I don't remember; C. E. Olmsted & Co. were millers; the rest were engaged in the elevating business, I believe, at that time.

122. X Q. Those in the elevator business purchased of you these before described machines, as referred to and used by Munn & Scott for cleaning grain, on a very large scale, did they not?

A. Yes.

123. X Q. Do you know whether Mr. Booth, the plaintiff in this case, made any claim to those large machines being covered by a patent of his, which patent was independent of the one involved in this case?

(Objected to as inadmissible and immaterial.)

A. I was so informed by some of the parties above named as engaged in the elevating business, and was subsequently informed that they had compromised the demand for a small amount, being threatened
191 with suit for infringement, if found away from Chicago.

Mr. Booth hands the witness a circular and asks him the following question: (Marked for identification 12,440, L. S. T., and which bears date Chicago, February 20, 1865.)

124. X Q. Do you not find in said circular the following clause:

"We understand Mr. Booth has lately obtained a reissue on his zigzag separator; the claim embraced in this we have examined, and believe, and are so advised by the most eminent legal ability, will not in any wise accomplish the object desired, namely, to constitute the 'Vaugh'n' zigzag separator an infringement on his. Mr. Booth is now fortified by reissues. Mr. Booth writes to a friend, 'I understand this infringement business thoroughly now and made it my business.' If Mr. Booth has rights that have been invaded the courts will not only protect him but punish trespassers."

(Objected to as introduction of evidence in chief on the part of complainant, and the complainant is informed that by doing so he makes the witness his own.)

A. I do.

192 125. X Q. Do you recognize the circular as issued by you and signed by you?

(Same objection.)

A. I do.

Circular offered in evidence by complainant and marked Complainants Exh. Baxter No. 1, E. G. T., Ex.

Complainant hands witness an advertisement marked for identification 126 X. Q. E G. T.

126. X Q. Do you recognize the section in the advertisement of a newspaper column?

(Same objection.)

A. I do.

Advertisement offered in exidence and marked Compl'ts' Exh. Baxter No. 2, E. G. T., Ex.

127. X Q. At the time you visited Racine with Mr. Turner did you or Mr. Turner have the letters patent of Vaughn?

A. Either the original or a copy.

128. X Q. Is that a certified copy of the original patent of Vaughn and like the one you took to Racine?

(Objected to because the copy shown witness is not certified to be a copy of the patent, but simply a true copy of matter from the files of the office in the matter of the application.)

193 A. I don't know, but presume it is.

129. X Q. Will you examine the specifications in that letters patent and tell me how James A. Vaughn 'clear' his sieves?

A. Mr. Vaughn, in his specification, describes that the attendant may clean the riddles from the end with a brush.

130. X Q. Please read what Mr. Vaughn says his invention consists of in that specification.

(Objected to, the patent itself being the best evidence and as immaterial.)

A. "My invention consists in the manner in which I have arranged my zigzag screens and incline boards with regard to the side chambers, with which the coarse impurities are carried, and the exit therefrom and the incline cockle-board and its delivery, as will be explained."

131. X Q. Did you learn when at Racine what interest under a license did Hart and Glass purchase of Booth, and what the consideration was to be?

A. Hart and Glass stated to me the nature of the license, but I cannot remember what it was, and the consideration, according to my best recollection, was that they had given their notes to Booth for three thousand dollars.

132. X Q. Do you know whether Hart and Glass ever paid those notes?

A. I do not, but they said they would not.

194 133. X Q. They said they would not after your explanation and exhibiting to them the two papers, and your general and voluntary communications with them on the subject?

A. It was during the interview, but at what particular period I cannot say.

134. X Q. Did you know in 1860 R. C. Mix, of Aurora, Illinois?

A. I knew of such a man very well by reputation as having been a prominent millwright, but doubt if I ever met him personally.

135. X Q. Did you not send him a notice at that time that the machine called Booth's zigzag separator, sold by William F. Noye, of Chicago, to him, was an infringement upon Vaughn's patent?

A. I have no doubt that a notice giving such general information was sent to Mix and everybody else where we thought it would be of any service to us.

136. X Q. Did you not also write to him that you would sell him Vaughn's for one-half what he had to pay for Booth's.

A. I have no recollection of it, but would not be surprised if we had held out some inducement of that kind, the construction of the Vaughn machine for equal capacity being so much more economical than Booth's.

195 (The latter part of the answer about economy objected to by Mr. Booth as irresponsive.)

137. X Q. In 1860, July 21st, or about that time, you were in Chicago and attended personally to your business?

A. I have no recollection to the contrary.

138. X Q. Did you know at that time Mr. C. Parker?

A. No.

139. X Q. I will read this letter, and see if you recognize it:

CHICAGO, *July* 21, 1860.

Mr. C. PARKER, Esq.,

DEAR SIR: Having understood that Mr. Mix purchased a Booth separator for you, we merely wish to state that the machine as now built is a direct infringement on the Vaughn patent, although Booth had a patent issued to him on September 20th, 1859, but a different machine; we do not intend this a threat, merely as a caution, and feel somewhat surprised that Mr. Mix's selecting, as we could have shown him certified copies of both patents, as also drawings of the same under the seal of the Patent Office, and in addition the price of our machines of the same capacity are nearly half less.

196 "When in Chicago, we shall be pleased to see you and explain our position in the matter. In Milwauke we exhibited our machine to a number of those using Booth's machines, and after cleaning stuff from his machine in ours, convinced them of its superiority, and as an evidence of it sold five in one day."

(The complainant is requested to show witness the letter, so that he may have means of identifying it if his. Complainant says he has no objection to showing it, and hands the letter to the witness.)

A. It is not my letter.

140. X Q. What does said letter purport to be?

(Objected to.)

A. It purports to be a letter from T. W. Baxter & Co., of Chicago, to M. C. Parker or Parks, bearing date July 21st, 1860.

141. X Q. Do 'u deny writing a letter containing the words read to you from said letter?

A. I neither deny nor admit having written such a letter. The paper shown me is is not in my handwriting, but I am inclined to think that such a letter was written by me, or by my direction, as it contains so much truth.

197 ("As it contains so much truth," objected to as argument of witness.)

142. X Q. A zigzag separator with sieves 6 feet in length you would term an extraordinary large machine, would you not?

A. That depends altogether on what it is intended to do.

143. X Q. When put to the same use and same general purpose, namely, the extraction of oats from wheat, in the flour mills in the country to whom you generally sold these machines.

A. That would depend upon the rapidity with which it was shaken, and the manner of producing such motion.

144. X Q. In the most possibly advantageous manner of which you know how to apply such shake-motion, would it not be considered a very large machine, and did you ever see one with longer sieves?

A. I have never seen a zigzag machine, to my recollection, with riddles more than six feet long; the result of my experience is, that with a series of zigzag screens, with say 5 screens to the series, if given a

short rapid motion, which has proved to be most effective, leaves such a body of grain to be kept in motion that it is not practicable nor economical to make the screens of so great a length, and therefore as you diminish the speed of the motion, and so diminish the capac-
198 ity of the machine, the ability is increased to extend the length of the screen.

145. X Q. What is the ordinary rule for increasing the capacity or decreasing the capacity of zigzag separators, as referring to their lengths?

(Objected to.)

A. The result of my experience has been that there is a limit to the length of a zigzag screen, when given the most effective motion for removing oats, which in my experience, according to my best recollection, is about 40 inches when 5 are used in a series, and my practice has been when a larger quantity was necessary to be cleaned of increasing the number of machines.

146. X Q. In the construction of any grain separator for the use of flour mills and their general introduction, is it not a favorable feature in said machines if they are not over high, or, in other words, is it not a favorable feature to lessen the height as much as possible?

A. It is.

147. X Q. You say the height of the Vaughn separator, No. 3, is 5 feet 8 inches; No. 4, 6 feet 9 inches; how high would a Vaughn
199 separator have to be built if the sieve is seventy-two inches in length?

A. Not being their mechanical engineer, and having given the subject no thought as being a useless proposition for the reasons already given, I cannot say.

148. X Q. It would have to be carried enough higher to admit of the cockle-sieve extending in the same plane of pitch as is now shown in the Vaughn zigzag machine, to the extent that it would reach to the extreme end of the sieves in order to receive the grain coming from the sieves and conduct it to the wind spout, if constructed on the same principles as they have heretofore been constructed.

(Objected to as immaterial.)

A. Undoubtedly, provided the proper angle is now described.

149. X Q. Is there any defect, or has there been, in the machine as constructed by Vaughn in regard to the pitch of the cockle-sieve?

(Same objection.)

A. I have never heard of any, nor am I aware that any experiments have been made to show that a less pitch would answer the purpose, as the height of the machine was never an objection to its sale.

150. X Q. In your answer to interrogatory 16 Q. you set forth there, do you not, in a general way, that a shake contrary to one at
200 right angles to the passage of the grain where the sieves are not level, or where there is a jar to the riddle, that the reverse, or as you term it the fore and aft, shake is in your opinion preferable?

A. That is my judgment.

151. X Q. You had, I understand, a very large experience in the sale of those Vaughn machines, had you not?

A. I think so.

152. X Q. Did you meet with serious difficulty with regard to the unevenness, that you allude to, of these Vaughn machines, so that the grain took an uneven direction across the sieves and were to any degree objectionable on that account?

A. We did to some extent, and consequently induced purchasers to

buy machines of a larger capacity than was absolutely necessary, and to avoid the difficulty likewise took a special pains to advise them of the great importance of keeping the yoke adjusted closely around the eccentric so as to prevent a jar.

(Objected to by Mr. Booth as irresponsive so far as after the first five words.)

153. X Q. Was this yoke that you speak of an especial improve-
201 ment on the Vaughn machine?

A. That is my impression.

154. X Q. Was it not a patented affair?

A. That is my impression.

155. X Q. Did that arrangement go upon these machines from their earliest history, or was it an afterthought?

(Objected to.)

A. I am not certain, but if not new at the commencement was so very shortly after we commenced the sale of the machines to any extent.

156. X Q. You considered that attachment a good thing, did you not?

A. I did.

157. X Q. Was it any fault of the attachment or the shape as used on those machines when properly adjusted, if the grain took any uneven course across the sieves referred to?

(Objections continued.)

A. I should say not; my impression is just the contrary would be the case over any attachment I was aware of.

158. X Q. You were, I understand, deeply and seriously interested in the improvement, if there was any to be made upon the same Vaughn zigzag machine?

A. I was.

202 159. X Q. Then why did you not, and do you know why Mr. Vaughn did not, or Turner, Parks & Co., the manufacturers, did not apply this preferable fore and aft shake to their machines?

A. We have had the subject of the different modes of shaking riddles under consideration many times, but it was not deemed advisable for them to make a change in the machine as long as it gave such general satisfaction.

160. X Q. Did not Turner, Parks & Co., or some of the members of that firm, send you a separator for extracting oat from wheat, and other impurities, with a series of sieves and return boards having the same general principles of separation involved therein that is found in the Vaughn zigzag separator, and did not such machines have the fore and aft shake, and did you not try and attempt its introduction in the western country in lieu of or in competition with the Vaughn zigzag machine and the Booth zigzag machine soon after April 9th, 1861?

(Objected to as immaterial and irrevelant.)

A. I presume that a machine having a series of screens all in one direction with a corresponding series of directing boards under each of them, and having a cockle screen and blast fan connected with
203 them, is what is referred to; if so, we received such a machine at Chicago from Turner, Parks & Co., in the early part of September, 1859; we subsequently received other machines, some of which we sold, and when used with the proper sized wheat according to the holes punched in the riddles gave entire satisfaction, and while it may have been offered as a competing machine with the Booth's zigzag separator, it was not offered as a competitor of the Vaughn, but simply to supply timid parties, whom Booth had attempted to frighten, as it was not our desire nor

was it for our interest to assume the expense of introducing another machine.

161. X Q. Where and when, and in whose mill or building, was the first machine of that descriptive you have just spoken set up and run?

A. At the competitive trial before the board of trade in the Griffin Elevator, in Chicago, which enables me to fix the time.

162. X Q. How many sieves had that machine?

A. Five wheat sieves, I think.

163. X Q. Was that machine remarkable in its extraction of oats from wheat?

A. So much so, that many at the exhibition stated that the wheat was fit to be used as seed.

204 164. X Q. Are you aware, or were you ever informed by Turner, Parks & Co., that the Patent Office rejected the application for the patent for the same machine above alluded to, on the ground that it was anticipated by the prior patent to J. L. Booth?

(Objected to as immaterial and irrevelant.)

A. I never was.

165. X Q. Does not the shake motion at right angles of the passage of the grain, as used by Vaughn and Booth, facilitate and aid materially the more even distribution of the grain upon the riddles of even surface and thickness, in a greater degree than a fore and aft shake, provided the sieves in all cases are perfectly level?

A. I know of no difference, nor do I remember of any difficulty experienced in the even distribution of grain on the riddles, whether on the Vaughn zigzag machine or the zig machine; I have had no experience with the Booth machine, but presume there was no difficulty in the even distribution on that; I see no reason why there should be.

166. X Q. If the opening through the hopper was admitting grain any faster in one particular place upon the upper sieve than another
205 from any incidental cause, such as might be the case by the obstruction of the orifice with some substance that would not pass through, thereby preventing the wheat from running through at that place, would not a shake at right angles to the passage of the grain have a tendency to reduce that uneven distribution to an even distribution more readily than the fore and aft shake?

A. A permanent obstruction would prevent the successful operation of the machine under either condition, and the only difference that could occur in the even distribution would be the difference in the length of stroke or motion given to the riddle, if at right angles to the passage of the grain.

(Answer objected to as not responsive.)

167. X Q. Supposing the stroke to be the same in either case, what is the result?

A. The difference would be regulated by the length of the stroke, in favor of the motion of the riddle at right angles to the passage of the grain.

(Adjourned by consent to April 5th, 1875, 9½ a. m.

BOOTH
vs.
TURNER ET ALS.

NEW YORK, *April 5th*, 1875—10 a. m.

206 Met pursuant to adjournment.
Present, counsel as before.

And the witness BAXTER, in answer to further cross-interrogatories propounded by Mr. BOOTH, says:

168. X Q. You say that there is no dead center in the use of an eccentric; what do you mean by that? Do you mean that that is generally so found to be the case, as regards an excentric motion in contradistinction to that of a crank motion?

A. I mean that in connection with the subject of this examination there is practically no dead center as compared with the crank, and so avoids the jar which would be objectionable in the shaking of the riddles, but I do not make this assertion in an abstract sense.

169. X Q. The motion resulting from the use of an eccentric is precisely that of a crank, is it not, so far as obtaining any reciprocating effect is concerned?

A. Yes.

170. X Q. Is it not a fact from your experience that eccentrics are generally used where a crank cannot be as well applied, or are they not usually applied for reciprocating purposes between the extreme
207 ends of revolving shafts as a substitute for a crank?

A. The substitution of a crank for an eccentric to produce a reciprocating motion depends upon the choice or judgment of the engineer in constructing the machine, but the result of my experience has been that the eccentric has been the favorite device, where a short stroke is desired.

171. X Q. Do you know of any good reason why an eccentric attachment could not be applied to the Booth zigzag separators?

A. I can think of none now.

172. X Q. Would you consider it a serious objection to the Vaughn separator if the one end, as now covered by the upright tube or spout, closing all access to that end of the sieves, and the sides of the machine oppósite the sieves, were entirely enclosed, and there could be no access to the riddles except at the end where the attachment for shaking is made?

A. Very much so.

173. X Q. Now, in the operation of the Vaughn machine, so far as its action upon the grain is had, and the Booth machine as constructed by him, in either of the two forms heretofore alluded to, is there any difference substantially in the general action and operation in the
208 various processes which the grain goes through from the time it enters the hopper up to the time it finds its exit from the machines?

A. None that I know of, except what I've already stated.

174. X Q. The zig machine referred to as having been sold by you, to some extent, was it a good or an inferior machine in its general aspects?

A. In its general features, when run properly, I know of no difference in its results except that its capacity for separation by the fan was limited by the length of the fan.

175. X Q. (The witness is shown a letter and asked:) Was that letter issued by your authority and directed to the party to whom it is addressed in the letter?

A. The letter shown me was written by my father, who was in my employ, and I presume the letter was addressed to Mr. Ford at Janesville, Wisconsin, where he resided.

(The letter is offered in evidence, and marked Complainant's Exhibit Baxter No. 3, E. G. T., Exm.)

THOMAS W. BAXTER.

And being further examined by KERR, says:

176. R. D. Q. Have you had access to your papers and books
209 relating to your business in Chicago recently?

A. No, sir; not for six years.

177. R. D. Q. State fully the character of your business there.

A. General mill furnishing business, but more particularly in supplying furnishings for flouring and grist mills.

178. R. D. Q. State the extent of your experience in the general business.

A. My personal experience extended from 1856 to 1869, and my business was a very extensive one, equalled by few, if any, in the country.

179. R. D. Q. State the prices at which you sold the Vaughn separator.

A. My best recollection is that we sold the number 2 machine, having a capacity from 40 to 50 bushels, at ninety (90$) dollars; No. 3, from 70 to 80 bushels, at 125$ (one hundred and twenty-five dollars); the No. 4 machine, with a capacity of 100 to 125 bushels, at 175$ (one hundred and seventy-five dollars).

180. R. D. Q. State whether there is any difference in the number of vibrations of the screens in the Vaughn machine sold by you, and
210 that which is possible to get in the machine shown in the Booth patent.

A. The number of revolutions given to the shaft on which the eccentric is placed, giving motion to the riddles, on the No. 2 and 3 Vaughn machines is 440 a minute; on the No. 4, about 380. I have known but one size of Booth's machine sold, and the best information I have is that no more than 175 revolutions could be successfully imparted to the crank shaft. Of course the vibrations in either machine would be twice that of the revolutions of the shaft.

181. R. D. Q. What effect has an increased number of vibrations in the use of a grain separator, such as Vaughn's?

A. To diminish the riddle surface requisite to separate a given quantity of grain; in the case of the Vaughn machine the increase of speed was so great as to very materially diminish the riddle surface, and so lessen the cost of the machine, and preserve its wearing qualities by reason of the lighter body kept in motion.

182. R. D. Q. Were the sides of the Vaughn machines sold by you and of which you have knowledge closed up so that the screens could not be cleaned from that point?

A. I never have seen such a machine, nor have I ever heard it
211 intimated that a machine was constructed in that manner until the commencement of this examination.

183. R. D. Q. State whether the device shown in the Booth patent for communicating the shake to the screens is capable of communicating the rapid vibration which is obtained in the Vaughn machine.

A. Not in my judgment, as from the construction of all cranks there are necessarily joints, which would tend to loosen, and so create the objectionable jar, as the weight of the body to be moved is increased; whereas, on the Vaughn machine, the motion being imparted to the riddles by means of an eccentric, there is no dead center, no joint, and it simply requires that the yoke should be adjusted, which is readily done, so as to leave no play practically between the yoke and the eccentric, and thus the jar is avoided.

184. R. D. Q. State whether this yoke and eccentric is a valuable feature of the Vaughn machine.

A. In my judgment, very much so.

THOMAS W. BAXTER.

Subscribed and sworn to the 5th day of April, 1875.

E. G. THOMPSON,
Examiner U. S. C. C., S. D. N. Y.

212 *Depositions on behalf of respondents.*

J. L. BOOTH
vs.
TURNER, PARKS & CO.

Met pursuant to notice.
Present, J. L. Booth.
" on behalf of respondents, Mr. Kerr.
April 8th, 1875.

Master.

The taking of testimony under notice adjourned till 9 a. m. April 9th, 1875.

Master.

APRIL *9th*, 1875—9 a. m.

Parties met pursuant to adjournment.
Present on behalf of respondents, Mr. Kerr.
" J. L. Booth.

Q. 1. State what percentage, if any, or other remuneration you allowed T. W. Baxter & Co. for the sale of the Vaughn separator.

A. We furnished the machines to Baxter & Co. at a give price, which gave him on the sale of machines about 30% commission.

Q. 2. Did your firm use any efforts to introduce and sell this machine?

213 A. We did.

Q. 3. Pl's' state what efforts.

A. The efforts made were principally made by traveling, advertising, circulars, & otherwise.

Q. 4. Can you give a statement of cost of printing & advertising in the sale of this machine since the 29th day of November, 1864?

A. No, sir; I cannot.

Q. 5. Can you make such a statement from your books or otherwise?

A. I don't think that we could from our books make any accurate statement of any such expense.

Q. 6. Can you give any estimate of what you think is the amount?

A. I can say this, that our expense for advertising this machine was considerable. I could not give an ac't of the expenses attending the advertising, &c., of this machine, as other machines were advertised with it.

Q. 7. What proportion of the advertising, as near as you can give it, was devoted to this particular machine?

214 A. I should think it would be safe to say that one-half of expense belonged to that machine.

Q. 8. State, if you can, the amount of traveling and other expenses incurred by the sale and introduction of this machine.

A. I cannot give any such statement.

Q. 9. State whether you can make an a/c of such expenses from your books.

A. Well, I think there could be by a lengthy examination of the books. I will further say that until recently we have not kept any separate and distinct a/c of the expenses attending the sale and introduction of the Vaughn machine.

Q. 10. State the amount as at present advised of these expenses, as near as you can, generally; I mean whether considerable or small.

A. There was considerable traveling done by one of the firm. Mr. Turner did the most of it in those days; the expenses were considerable.

Q. 11. State how much you paid or allowed A. K. Halteman, of St. Louis, for the sale of the Vaughn machine.

215 A. We furnished machines to Mr. Halteman at a given price and he had the privilege of selling them at his own price. The a/c rendered will show the prices we charged him.

Q. 11½. State what was the nature of the arrangement with G. & W. Todd, of St. Louis.

A. The arrangement was much the same as with the other parties. The machines were furnished at a given price; there was no arrangement made as to the price for which he should sell. I suppose he sold at the price he thought proper.

Q. 12. State whether the prices given in the schedule furnished by you shows the entire amount received by you for the Vaughn machine from the parties just named.

A. It does so far as I know; I believe it to be so.

Q. 13. In the manufacture and sale of these machines what is the am't you calculated (what per cent.) upon realizing, in view of the cost of the machines?

A. I don't remember that we ever had any such estimate. We
216 generally in the manufacture of machines calculate upon a profit of 25%; but in these particular machines, I don't remember that we ever calculated any such percentage.

Q. 14. Then your estimate of profits on this machine given in your former examination is your calculation of the actual result of the manufacture and sale of this machine?

A. Yes, sir.

X-ex. by BOOTH:

X Q. 1. Did you ever have any written contract with T. W. Baxter & Co. referring to any percentage that he should have in the sale of these zigzag separators?

A. I have no recollection of any written contract as to any percentage or commission.

X Q. 2. Was, so far as you know, said Baxter & Co. limited to any particular prices for which he should sell those machines?

A. No, sir.

217 X Q. 3. What do you mean, then, by the 30 % that you allowed him for sales?

A. I am not aware that we allowed him 30 % on sales.

X Q. 4. Please explain what you mean by your answer to direct question No. 1 in regard to 30 %.

A. The explanation is that the difference between the price at which we furnished them the machine and at which he could or might sell them at would give them about that percentage.

X Q. 5. Do you know to any extent the prices at which Baxter & Co. did actually sell these machines at?

A. I think I knew at about the time of the selling of the machines what they got for them, but I don't now remember.

X Q. 6. Since Nov. 29, 1864, you have manufactured and sold a machine known as a combined smutter and separator, a machine known as a smutter independent of such combination, a machine known as a warehouse or receiving separator, any of one, the sales of which have been quite as large, as well as the Vaughn zig-zag separator, which you manufactured & sold at the same time, have you not?

218 (Counsel for respondent objects to the question as irrelevant, and as not properly X-examination.)

A. Well, as to the general question, I will say we have manufactured and sold all of these machines. I should say as to the warehouse separators the sales have been quite limited. I speak as compared with the sales of the zig-zag.

X Q. 7. In the sale and introduction of these several machines the expenses referred to in the introduction of the zig zag machine were also embraced at the same time in the expenses involved in the sale of the other said machines which you made effort to *to* sell and introduce at the same time that you sold the zig-zag, were they not?

A. The expenses were all together. There was no separate a/c whatever.

X Q. 8. The market for the sale of these machines was found among the millers of the country almost exclusively, was it not, excepting the limited number referred to as having been sold to elevators or warehouses?

A. Yes, sir; principally amongst the millers.

219 X Q. 9. In your business history with T. W. Baxter & Co., of Chicago, you were well informed of his general efforts, both as to the sale of the Vaughn zig zag machine and his resistance to the introduction of similar machines manufactured by J. L. Booth, were you not?

(Counsel for respondents objects to the question as unimportant.)

A. I was aware of his efforts to sell the Vaughn machine; as to his resistance to the sale of similar machines, I know nothing about.

X Q. 10. Didn't you have very frequent communications with Mr. Baxter, in which was reported anything in regard to Booth and his zig-zag separator, and its introduction into the Western market at Chicago?

A. From recollection, I should say that in a business way our communications were frequent; that when he wanted anything he corresponded with us. I learned by the correspondence that Baxter did oppose a machine which was manufactured by Booth which we regarded as an infringement of the Vaughn machine, and who he (Baxter) did

220 oppose to his utmost.

X Q. 11. You considered then, did you not, that your interests in a general sense were identical with that of T. W. Baxter & Co?

A. As I understand the question I should they were.

Redirect by Mr. KERR:

R. Q. 1. Will you please prepare a statement as near as you can from your books of the expense of traveling, advertising, & printing in the introduction & sale of the Vaughn machine, to be produced before the examiner when completed?

A. I will do so.

GEO. PARKS.

The further taking of testimony adjourned till 2 p. m.

Master.

Met pursuant to adjournment 2 p. m., April 9th, 1875.

Master.

Further taking of testimony adjourned sine die.

Master.

221 APRIL, 13TH, 1875.

Pursuant to notice met for final hearing.
Geo. Willey present for complainant.
Adjourned till 14th.

Master.

Met pursuant to adjournment and adjourned.
April 14th, 1875.

Master.

APRIL 27TH, '75.

Met pursuant to notice.
Present, Mr. Kerr for resp'nd'ts, Geo. Willey for complainants.

Master.

As Mr. Parks informed his attorney that owing to the fact that they did not keep a detailed and specific a/c of the expenses attending the sale and introduction of the Vaughn machine, he is unable to make the statement called for in his previous examination, he desires this answer to be entered in his behalf, which is accepted by the parties hereto.

Master.

222 GEORGE PARKS, being first duly sworn, cautioned, &c., says:

Q. 1. You are one of the defendants in this cause?

A. Yes, sir.

Q. 2. What has been your part of the business in your manufacturing establishment?

A. I have mostly attended to the office work and some outside work.

Q. 3. Have you with you the books showing the manufacture and extent of sale of grain separators; if so, please produce them and furnish the examiner a statement of the manufacture and sales, when they were made, and at what prices?

A. I have the books here and a statement prepared showing the number of machines sold since Nov. 29, 1864; the first machine sold since that date being sold Jan'y 10, 1865. Statement shows where the machines were sold, as also the prices at which they were sold. The statement is herewith submitted and attached as part of this answer, marked Exhibit Defendants' Account.

223 Q. 4. Please state what was the cost of the material and labor in the construction of these machines.

(Objected to by Mr. McKinney for def'ts.)

A. I am unable to say what the cost was.

Q. 5. Will you look over this account with books and answer the above question as nearly as you can?

(Same objection repeated by McKinney for def'ts)

A. Yes, sir; I will do so if it is required.

Q. 6. We would like an answer to the question; when can you furnish it?

A. It can be done soon after my return home. It can probably be done during the ensuing week.

(Not furnished examiner.)

Q. 7. In the meantime, and now please give your estimate as nearly as you can make it by looking over the account & without recurring to the books as to how much the sale prices given in your a/c exceed the cost of the material and labor expended in the production of the machines?

(Objected to by Mr. McKinney for def'ts.)

224 A. I don't see hardly how I can answer the question until I determine the cost of the production of the machine. I would be willing to say this, that in my judgment the average profits would be in the neighborhood of 20 % of the selling price according to the statement furnished, that is to say, I suppose that the amount of profit on the basis suggested by the question of the difference between the selling price and the cost of material and labor, would be about ¼ of the aggregate am't of the a/c I have furnished.

Q. 8. Your account shows 3 sizes of machines, 2 & 3 & 4; state the working capacity of each number?

A. I am unable to state without examination, which I will do and furnish the information.

Q. 9. Will you state the localities of the different parties respectively named as purchasers in your a/c, and as a short way of doing this will you insert the localities in the a/c itself?

A. I will do so, so far as I am able. I will further state in answer to ques. 8, that I find I have one of our circulars with me, which gives the capacity of our machines 2, 3 & 4, as 40 to 50 bushels per hour, 70 to 80, & 4, 100 to 125, respectively.

225 Q. 10. Please furnish copy of circular you refer to.

A. Copy of circular is here pruduced.

The same is hereto attached, marked Def'ts' Ex. Circular,

Master.

SEPTEMBER 29TH, 1874.

Examination resumed.

Mr. McKinney present on behalf of defendants.

Geo. Willey " " " " complainants.

Q. 11. I find in this statement of account exhibit several charges of machines shipped to G. B. Turner, Baltimore, on several different dates; can you tell why these machines were not charged at about the usual rates, & why they were charged at all to G. B. Turner, a partner?

(Question objected to by McKinney.)

A. Mr. Turner went to Baltimore to sell machines on his own account under an arrangement with the company. The arrangement with the company was that he should have the machines at a certain price, or at a certain discount from the price list. These machines charged were shipped under these agreements. He sold machines both at Baltimore and at other places, I think on his own a/c.

Adjourned till further notice.

226 Met pursuant to notice (verbal).

Q. 12. You say you have a list price? If so, how do you account for the machines sold at different prices, as, for instance, the machines sold to Baxter & Co., of Chicago, August 15th, 1865, 1 No. 2, $70.00; Aug. 29, 1 No. 2, A. K. Haldeman, St. Louis, $75.00; July 29, 1 No. 3, Tarlton & Co., St. Louis, $90.00; Sept. 11, 1 No. 3, Haldeman, $100.00. Why does this discrepancy occur?

(Question objected to by McKinney,)

A. The difference arose from the fact that we gave different commissions to different parties.

Q. 13. Was T. W. Baxter & Co., of Chicago, your agents during these years covered by this a/c?

(Question objected to as above.)

A. They were.

Q. 14. Were also A. K. Haldeman and Todd, of St. Louis, agents for sales of these machines?

(Same objection.)

A. The Todds were our agents by arrangement, the same as Mr. Baxter; Haldeman occasionally sold our machines for us without any
227 special arrangement. I suppose he would be considered our agent. He bought our machines at a certain price or a certain commission off, and he sold them.

Q. 14½. You stated that the discrepancy in the price of machines sold to Todd & those sold to Haldeman was owing to a different percentage arrangement in the sale of the machine, and now you say that Haldeman was not an agent, and didn't sell under that percentage.

(Same objection.)

A. I believe I said, I meant to anyway, that I have no recollection whatever of any arrangement with Mr. Haldeman as our agent, but that we took off a certain percentage and he bought them of us and sold them for himself.

Q. 15. Had you any further interest in the sale of the machines by Baxter & Co. than the amount charged them as expressed in the statement of a/c?

(Same objection.)

A. We had no further interest beyond the price we charged them as expressed in statement.

Q. 16. Are your books from which these accounts are taken now here?

228 (Same objection.)

A. The books were sent here, and I suppose they are here now. They are all the books of account we have.

Q. 17. Do you not keep a ledger account with Baxter & Co.?

(Same objection.)

A. Yes, sir.

Q. 18. Will or can you produce it from those books?

(Same objection.)

A. I can't produce it to-day. I brought all the books of original entry, supposing that would be all that necessary.

Q. 19. From what source, or how, did you make your estimate of the cost of these machines?

(Same objection.)

A. I will answer in a general way that it was arrived at by the expenses attending manufacturing, labor, materials, &c.

Q. 20. Can you tell how many pounds of zinc, how many pounds of

sheet-iron, how much lumber, and how many days' labor go into the construction of a No. 2 machine?

(Same objection.)

229 A. I cannot at the present time.

Q. 21. Did you build these machines by the single machine, or by the quantity, & how many machines did you usually get in one lot?

(Same objection.)

A. As a general thing, the material for six machines was got out and prepared at one time; sometimes a less number, 2 or 3; but never more than 6 machines, if I recollect.

Q. 22. Did you make any item or nice estimate as to the amount of stock that went into one of these machines?

(Same objection.)

A. Well, we did, so far as we thought it necessary to get at the cost of manufacturing the machines. I have no recollection of weighing material, but we got at it as near as we thought necessary.

Q. 23. Have you or have you not manufactured other grain-cleaning machines at the same time you were making these machines?

(Same objection.)

A. Yes, sir; we were.

230 Q. 24. Under the circumstances, would you cons'der it possible for you to give the exact cost of these machines?

(Same objection.)

A. Don't think I could do it.

Q. 25. In your statement where you have stated that you do not think the profits in the manufacture and sale of these machines has been over 25 %, how did you arrive at that result?

(Same objection.)

A. Well, it was my opinion of our general business—the knowledge of our business—not from the examination of book.

Q. 26. Have you made any further estimate in the expenses of this separator business than the cost of the construction of these machines?

(Same objection.)

A. When I give it as my opinion that the profits of our business is not over 25 %, I count in all the necessary and proper expenses of the business, including traveling expenses, &c., &c.; bad debts, &c.

Further examination adjourned till Oct. 1st, 1874, 10 a. m.

Master.

Examination resumed pursuant to adjournment Oct. 1st, 1874

231 Present on behalf of complainants, Willey.

" " " " defendants, McKinney.

Q. 27. Will you refer to journal of 1865, Nov. 10, page 347, charge of 1 No. 2 zigzag machine to Williams, Gardner & Williams, Chagrin Falls, and state whether it is an omission or not?

(Question objected to by Mr. McKinney as incompetent.)

A. It is an omission, unless it is embraced in the a/c stated; machine sold for $90.

Q. 28. Please refer to page 265, Sept. 19, 1865, charge 4 No. 2 zigzag machines to T. W. Baxter & Co. Is this an omission?

(Question objected to as before.)

A. I find no such entry on that page of the books, and consequently no omission; but do find such an entry on page 265, Sept. 19, 1866, which is an omission.

Q. 29. Please refer to page 296, Oct. 20th, 1866, charged to Warden & Barrett, 1 No. 4, $200. Is this an omission?
(Same objection.)
A. That is an omission.
Q. 30. Turn to page 525, June 21st, 1867. Do you find R. H. Heywood & Co. charged 1 No. 4, $190? Is this an omission?
232 A. Yes; it is an omission.
Q. 31. Turn to page 53, Sept. 30, '67; do you find Haldeman charged 3 No. 3*d*, $300; is that an omission?
(Same obj.)
A. Yes, sir.
Q. 32. Turn to page 62, Oct. 11th, 1867, T. Gregg, 1 No. 3, $130; is that an omission?
(Same objection.)
A. It is.
Q. 33. Turn to page 74, Oct. 22nd, '67, charge Baxter & Co., 1 No. 3, $90; is that an omission?
(Same objection.)
A. It is.
Q. 34. Turn to page 103, Nov. 18, 1867; do you find charged to Christian Krautz, 1 No. 2, $75; is that an omission?
(Same objection.)
A. This is not an omission, and should not be charged in the a/c, as it is a machine on hand, and not been sold, in the hands of agent at Evansville, Indiana; not included in my statement.
Q. 35. Turn to page 423, Aug. 13, 1868; do you find a charge,
233 Holmes & Blanchard, 1 No. 2, $75; Haldeman, 2 No. 3*d*, $180; is this an omission?
(Same objection.)
A. The Holmes and Blanchard is an omission. The other is not.
Q. 36. Turn to page 427, Sept. 27, '68, G. B. Turner, 1 No. 2, $60; is that an omission?
(Same objection.)
A. Yes, sir.
Q. 37. Turn to page 446, Aug. 10th, 1870, M. Keat, 1 No. 3, $120; is this an omission?
(Same objection.)
This is an omission.
Q. 38. Turn to page 488, Oct. 27th, 1870, Todd & Co., 1 No. 2, $66.50; is that an omission?
(Same objection.)
A. It is.
Q. 38½. Turn to page 594, Nov. 9th, 1870, Holmes & Blanchard, 6 No. 2, $75; is that an omission?
(Same objection.)
A. It is.
234 Q. 39. Turn to page 624, April 28th, 1871, Galligo Mills Manuf'g Co., 2 No. 4, $360; is that an omission?
(Same objection.)
A. I have it marked in my books as on the statement; if it is not there it should be.
Q. 40. Prior to Nov. 29th, 1864, did you not ship to Baxter, your agent, quite a number, more or less, of these separators, and charge the same to him?
(Same objection.)

A. I think we did so ship machines to him.

Q. 41. Turn to page 136, Dec. 13, 1864; do you not find T. W. Baxter & Co. credited with draft $499.10?

(Same objection.)

A. I find such an entry on that page.

Q. 42. Turn to page 138, Dec. 15th, 1864; do you find T. W. Baxter credited with $538.62?

(Same objection.)

A. I do.

Q. 43. Turn to page 173, Feb. 29th, 1865; do you not find T. W. Baxter & Co. credited with $500.00?

(Same objection.)

A. I do.

235 Q. 44. Do not these three several items included in the above questions relate to separators sold by him since Nov. 29th, 1864?

(Same objection.)

A. I hardly know how to answer that question. They were our agents for the sale of smut machines and other articles, and these are credits on their indebtedness. I can't say whether these were on a/c of separators or other articles.

Q. 45. In your opinion would or would it not be fair to presume that a portion if not all of these three several remittances above named cover the sales of separators sold by said Baxter & Co., as agents, since Nov. 29, '64, & that said separators are not reported in the statement submitted herein?

(Question objected to by Mr. McKinney.)

A. Well, I should say that it would be fair to presume that a portion should be credited to separators, but am unable to say what portion—I mean zig-zag. I have no means of ascertaining anything about it.

Q. 46. Will you obtain from your agent, T. W. Baxter & Co., a copy from the book of sales of said B. & Co. a statement of sales of

236 zig-zag separators furnished him by Turner, Parks & Co. from Nov. 29, 1864, to 1st of March, 1865?

(Question objected to by McKinney.)

A. I have no objection to getting it if it can be done, if required to produce it.

Further examination adjourned till 2 p. m., Oct. 1st.

Master.

Examination resumed, pursuant to adjournment, 2 p. m.

Present for defendant, Mr. McKinney.

" " complainant, Booth.

Q. 47. Please look at ledger a/c of T. W. Baxter & Co. in your ledger now present, for years 1864 & '65, and see if you find the 3 items $499, $538.62, & $500.00, as before described in questions 41, 42, & 43.

(Same objection.)

A. I find the items 499 & the item 538.62 separately; the item $500.00 is probably embraced in another entry of page 173, journal.

Q. 48. Please give the items of amounts credited to Baxter & Co. between the dates Nov. 29, '64, and March 1st, 1865, exclusive of the three items $499, $538.62, & $500.

(Same objection.)

A. There are no other; the items 499, 538.62, & 500 are cash,

237 and are the only cash items between these dates.

Q. 49. Please look at the same a/c and see if you find any zig-

zag separators charged Baxter & Co. between Nov. 29th, '64, and January 10th, 1865.

(Same objection.)

A. I do not find any.

Q. 50. Where are those machines represented in your report as unsold?

(Ques. objected to as before.)

A. They are on hand at our shop, I believe.

Q. 51. Have you sold any zig-zag separators since this report was made out?

(Ques. objected to.)

A. No, sir.

Q. 52. Have you sold or received pay for any zigzag separators since April, 1871, except what are contained in the books?

(Same obj.)

A. Do not know.

Q. 53. You state in your statement that No. 4 separators cost $100, & No. 3 $60, in your opinion; please state what particular difference there is to make them cost so much more than No. 3.

(Same objection.)

238 It is the difference in material and labor.

Further taking of testimony adjourned to Dec. 1.

Master.

Met pursuant to adjournment, Dec. 1.

Master.

Q. 54. Have you sold or received pay for any machines since the rendering of your statement of a/c?

A. I think not, but I wouldn't say positively.

Q. 55. What amounts do your books show as having been received from Baxter & Co. after the date of the reissue, & can you state for what those amounts were received? I refer to amounts which are not embraced in the statement of a/c which you have rendered.

(Same objection noted.)

A. I cannot state what number of machines, if any, were sold by Baxter after the reissue besides those embraced in the statement of a/c I have rendered.

Q. 56. Please furnish a statement of the a/c with Baxter from its commencement.

(Same objection.)

239 A. I put ledger B in evidence, which contains the a/c.

(Counsel for defendants objects to books going in.)

Parks' testimony is continued on page commencing No. 1.

Booth's deposition.

Q. 1. Please go on and make your statement of facts pertaining to your damages sustained by infringement of reissue Nov. 29, '64.

(Question objected to.)

A. I have not manufactured nor sold machines myself since the reissue Nov. 29th, 1864. Prior to that, however, I had given a good deal of time and attention to the business of selling and introducing and obtain'g machines to be manufactured under contract. The prices set by me upon and obtained by me for No. 2 separators, manufactured upon

my order, was $135 00 each; No. 3 separators, $150.00; a machine called No. 1, large-size machine, cleaning 100 bushels per hour, was sold by me at $150.00, parties who purchased building their own machines. The contract price paid by me for manufacturing No. 2 & No. 3, which
240 I speak of, $35 for No. 2. & $45 for No. 3. The No. 1 which I speak of, as near as I can remember, cost $75. The sieves for that machine were 6 feet in length and 15 or 16 inches wide, or the reverse of that would be proper. I will state in regard to the machine as it has been constructed by me, that on those sizes of machines I have aimed to maintain a profit, which embraced the right of using when sold, of $100 on No. 2, 105 on No. 3, & 150 on No. 1. I have licensed the manufacture of this machine under the patent at the same rate of profits. Such machines have been manufactured under such licenses and sold, and I have been paid my royalty of 100 on No. 2, or on a machine which corresponds in size to the No. 2 manufactured by me, and 100 on the No. 3, or on a machine which corresponds in size to the No. 3 manufactured by me, said licensee agreeing to report monthly all machines manufactured and sold.

(Counsel for defendant makes objection to all the foregoing statement.)

Further examination adjourned till 2 p. m.

Master.

241 Q. 2. You may state whether or not the prices paid by you for the manufacture of your machines respectively were or were not fair prices & compensation for building them.

(Same objection.)

A. They were in my judgment fair and reasonable.

Q. 3. State whether or not the prices for which you sold said machines respectively reasonable and fair prices?

A. I considered them very cheap, from the fact that the machines would pay for themselves half a dozen times a year.

Q. 4. How did your machines, of the different machines, correspond, if at all, with the machines manufactured and sold by the defendants as rendered in their statement?

(O .)

A. The numbers of my machine correspond with the numbers of the machines of the defendants as to capacity. There is some difference in the sizes of the machines. My machines are larger somewhat than the numbers of the defendants'; my No. 2 separator, the sieves are three feet in width by about 18 inches. They have 6 sieves of that size,
242 with plain zinc underlinings of the same size, while the No. 2 machine of the defendant' is somewhat shorter as to width of sieves, & I believe has but 5 sieves. My No. 1 corresponds to the No. 4 of the defendants in capacity; it is a larger machine.

Q. 5. What difference, if any, would there be between the necessary cost of manufacturing and salable value of your machines & the defendants, as they have been numbered and described?

(Same objection.)

A. The defendants' machine can be made for less money in consequence of its taking less stock in zinc, for instance, and the slight difference in construction in reference to the application of the shake-motion. Don't know as there would be any difference in value; might be a difference according to fancy of purchaser. I think that either the plaintiff's or defendants' machines are worth all that I ever charged for mine.

Q. 6. State what damages you have sustained by defendants' infringements.

(Objected to.)

A. I have sustained damages equal to the profits of the number
243 of machines that have been sold by the defendants had they been sold at the prices and profits fixed upon my own machines, as heretofore specified.

Q. 7. You may state whether or not, had it not been for these infringements by the def't', you could have and would have supplied the market demand for such machines.

(Objected to as before.)

A. Yes, sir; I could.

Q. 8. How much profit would you have made on each machine, respectively, thus supplied by you, giving the profit on each number of machines?

(Objected to.)

Would have made profit on each; No. 2, $100.00; No. 3, 105; No. 4, 150.

Q. 9. You may state what expense or liabilities you have incurred in the way of counsel fees, expenses other than costs of suit, and *and* loss of time on your part, by reason of the defendants' infringement, & in prosecuting this suit for the same; state each separately.

(Objected to.)

244 A. I don't think my attorneys' fees will be less than $1,000; expenses other than costs of suit, not less 459 or $500; traveling and incidental expenses; time, probably 6 weeks; my time is worth $10 a day, at least.

Further examination adjourned till Dec. 2, 9 a. m.

Master.

Examination resumed Dec. 2nd, 9 a. m.

Master.

X 'amination by HERR:

X Q. 1. Have you testified before in this case?

A. Yes, sir; before the trial of the patent.

X Q. 2. You refer, in your testimony heretofore given in the case, to Ex. B, as a model or plan of a machine. Are the machines that you speak of in your ex.-in-chief, at this time, made after that model or plan?

A. Part of the machines, or generally the machines spoken of in that ex., were different in construction, but some of them were the same in construction. No. 1 is the same.

X Q. 3. How many machines did you make and sell after the plan of Exhibit B?

245 A. There were some 6 or 8 of that kind of machines, form and size, made.

X Q. 4. In your former testimony in this case you stated that there were only 6 of those machines; do you wish to change that statement?

A. I don't know that I did so state. You say so. Read it to me.

X Q. 5. If you did state in that examination that there were only six, was the statement correct?

A. The statement was correct as near as I can now judge. I know there were 6 made, and I think 2 more that went East; that is my impression.

X Q. 6. You are not positive then of only 6?

A. No, sir.

X Q. 7. When were these 6 made, and where were they put or sold—into what mill?

A. Those machines, the first one was made at Cuyahoga Falls, O., in April or May, 1859; that machine was shipped to Rochester, N. Y., to set up in the Crescent Mills, owned by G. W. Burbank, of that city, and started in operation the 10th of June, 1859. Between that time and Sept. 20, '59, 2 more of the same size and pattern were made and
246 set running in the Frontier Mills, at Black Rock, N. Y. Within the next year, I can't give the exact dates, 2 more machines of same kind and size were put into the same mill. The one at the Crescent Mills was also duplicated within the same year. Those I am certain of, and the others, as I say, are matters of some speculation.

X Q. 8. How many machines in all, of any plan or model, did you build and put in operation between the spring of '59 and Sept., '59?

A. The 3 machines spoken of before.

X Q. 9. Look at the circular now handed you, signed J. L. Booth & Co., and particularly the cut thereon, and state if the 3 machines last spoken of by you were made after the model represented by that cut.

(Objection to question by Mr. Willey, unless entire circular is put in as an ex.)

A. The cut represents the model after which the machines were made.

X Q. 10. Is that cut like Ex. B in the case?

247 A. It is like Ex. B, as I suppose is my model in the case.

X Q.11. When, if ever, have the defendants made any machine or machines like the model of Ex. B?

A. They have made machines substantially the same from Sept., 1859, until the present time.

X Q. 12. I want a direct answer to my question. I hav'n't asked you whether they were substantially like it or not, & now state whether to your knowledge they have ever made a machin · like that cut or model.

A. Not precisely.

X Q. 13. Is it not true that their machine, or the machines manufactured by them, were all m ·de after & according to the plan of Ex. C, or the Vaughn machine as it is called?

A. I think they are generally the same.

X Q. 14. You say they are generally. If they differ in any respect, pl's' state in what.

A. There is no essential difference; there may be some minor difference, there is no material difference.

248 X Q. 15. As I understand you, your first machine was built at Cuyahoga Falls in 1859. Who drew the model or draft for that machine, who buit the machine, & was the draft made in accordance with your letters patent?

A. I made the draft myself; the machine was manufactured by Lyman Hatfield, of Cuyahoga Falls, & the machine and draft represent my letters patent.

X Q. 16. What became of that draft after which the machine was built?

A. The draft was drawn on a board at the time of the building of the machine, and was not preserved.

X Q. 17. Who destroyed it?

A. I don't know as it was ever destroyed, or what became of it.

X Q. 18. Was that the only draft you had there at Cuyahoga Falls?

A. I think so.

X Q. 19. What time in the year was that?

A. Near as I can remember it was in April, 1859; April or May.

249 X Q. 20. Look at the paper I now hand you, & state if you ever saw it before.

A. I don't recognize it sufficiently to say whether it is my work or some one else's. There is some writing or figures which seem to be in my hand. I should be inclined to think it was the draft that I used in the construction of the first machine at Cuyahoga Falls.

X Q. 21. Is it a correct draft of your machine?

A. It is incomplete, unfinished, and in a rude state, but so far as it goes it has a general resemblance to my machine; 'twas used in constructing the machine.

X Q. 22. Am I correct in understanding you that this draft on this paper and the one upon the board referred to by you are alike?

A. I am inclined to think that this—well I can't answer that. I don't know whether this is the original draft or not. I took none with me when I went away.

X Q. 23. Had you any other draft of that machine that sum-
250 mer at Cuyahoga Falls than these to which you have referred?

A. Not that I know of now.

(Counsel for defendant here offers in evidence said draft marked Exhibit Draft No. 1. , master.)

X Q. 24. How many times were you at Cuyahoga Falls during the spring, summer, & fall of 1859?

A. Well, I claimed to live there at that time; my wife was there; previous to 1959 I had been away about two years. During my absence in the two years alluded to, my wife and family were with me in N. Y., where I was temporarily engaged in business. I left N. Y., taking my wife and family, not expecting to return there; closed up my business there and returned to Cuyahoga Falls in the spring of 1859, my wife remaining there at my father's house while I went to Rochester with this machine spoken of & set it up, and remained there, I think, until Oct. of that year. I made two or 3 visits to and from Rochester & Black Rock, N. Y.

251 X Q. 25. The Lyman Hatfield spoken of by you had been engaged more or less for some time in working for you on your machines of different kinds, had he not?

A. He had manufactured machines for me under contract.

X Q. 26. Were all the machines that you made or had made during the spring, summer, and fall of 1859 made at Cuyahoga Falls?

A. No. sir; balance of them made at Rochester, N. Y., by Joseph Hall, of Rochester, generally during that year; that is, the ones I have already referred to as made the first year.

X Q. 27. When did you first see what is called the Vaughn machine, & where?

A. I saw a machine, a separator, in the shops of Turner, Parks & Co., not quite completed, evidently which had the resemblance of a machine patented by Jas. A. Vaughn, & which model, in Washington, & draft in said letters patent to Vaughn represent very nearly the machine which I saw in Turner, Parks & Co.'s works, in Sept., '59, I think, it might have been in August.

252 X Q. 28. When did you first make a machine like Exhibit C in former ex. in this case?

A. Never made one like it. If I understand the question, Ex. C re-

presents the machine as manufactured by the defendant and put in evidence by plaintiff.

X Q. 29. Did you not in your former examination in this case as a witness, in answer to the following question, then put to you, "When did you first make a machine such as you described in your ans. to x q. 12 as being very near like Ex. C?" state when you made it?

A. I refer to the original testimony in this case when I made it.

X Q. 30. Do you decline to answer my question?

A. No, sir.

X Q. 31. Please answer it, then.

A. It was made some time between the 10th of June, 1859, and January 1st, '60; can't give the exact date.

X Q. 32. Will you swear that it was made before Oct., '59?

A. I would not.

253 X Q. 33. What is your best recollection, if you have any on the subject, as to the month in which that machine was made?

A. To the best of my recollection the first machine alluded to was not completed before the middle of December of that year, although I am aware that such a machine was in progress for some time before.

X Q. 34. Who made that machine, and where?

A. That machine was made in the shops of Joseph Hall, by some of his men there I think, at Rochester.

X Q. 35. Where is that machine, or what did you do with it?

A. That was a No. 2 machine in size. It was sold to Blackstone & Parton, of Mendola, Ills., in the early part of 1860, for $150.

X Q. 36. Look at the letter now handed you, to be hereto attached, marked "Ex Letter," and state in whose handwriting the same is.

A. It is mine.

X Q. 37. How many machines in all—I mean grain-cleaning
254 machines—other than the 6 you have heretofore spoken of, have you made or caused to be made since 1859, and how did they vary in construction from Ex. B in this case, or the 6 machines built by you as hereinbefore stated?

A. I refer to my answer to the same question put to me in my original examination in this case, on this point, as my memory was more fresh then than now, with this exception: that the machine manufactured by A. K. Haldeman, of St. Louis, under license from me, and called the St. Louis Zigzag Separator, resembles the 6 machines first manufactured by me, as well as my Ex. B, more generally perhaps. Of the St. Louis Zigzag machine there has been made, under the license spoken of, 25, 30, or 40 machines.

X Q. 38. Can't you tell how many machines you have manufactured or caused to be manufactured during the time embraced in the last question?

A. Cannot exactly; my best recollection would be between 100 & 150 machines.

X Q. 39. Hav'n't you any books or a/c showing the number made or sold; no a/c of sales?

255 A. I havn't books that I should consider reliable as to anything exact. I have books that I have kept more or less of my different kinds of enterprises for the last 25 years.

X Q. 40. Will you furnish those books for examination in this inquiry?

A. As the books refer to so much more other business than this subject refers to, that I must decline to produce them unless legally required to so do, but I offer to answer any question to the best of my recollec

tion as to any a/c that may be there having reference in any manner to this examination.

X Q. 41. Will you furnish to the master com'r in this case said books for inspection in so far as they relate or contain entries relating to the manufacture & sale of said machines, & to have an a/c of said entries taken from said books by him or by some person by him selected for that purpose?

A. If I am legally bound to do so, I will with pleasure; but unless I am legally bound to do so I don't propose to offer my books in this case.

256 X Q. 42. Who do you insist upon as to determining the legality of the production of those books?

A. I refer to my att'y; if he says there is any rule to furnish them, I will do so.

X Q. 43. In your testimony in this case heretofore given, in speaking of the manufacture of machines after the arrangement or plan of Ex. C, and after which plan you nearly constructed your machines after the construction of the first 6 machines, you say the same are more economical and less complicated than the plan after which said 6 machines were constructed; are you still of the same opinion?

A. I answer yes, with this explanation: The plan of construction is more economical; it being a small machine, the plan of driving the shaking and giving motion to the machine being somewhat simplified, because not so much strength is required.

X Q. 44. Is that the reason that you abandoned the plan represented by Ex. B, in evidence, after the construction of the first 6 machines?

257 A. Don't know that I ever abandoned any plan. Those machines were very well adapted for the work they were to do & the place they were to be put.

X Q. 45. Now state fully and in detail wherein the machines you have manufactured since said 6 were made differ in arrangement and construction from said 6 machines.

A. I will answer that question by referring to an ex. put in by the defendants of a model of my machine, such as I constructed after the said 6.

X Q. 46. When did you license Mr. Halterman, of St. Louis, and what was the license?

A. Mr. Halterman took out a license in the spring of '72, I think, to manufacture a machine called the St. Louis Zigzag Separator. The license gives him the right to manufacture and sell the machine at prices stated by myself at which he shall sell them for, according to the number of each machine, which prices are expressed in Mr. Halterman's advertised circulars in reference to the machine, he agreeing to sell them at those prices, paying me all over $40 for a No. 2
258 separator; all over $50 for a No. 3 separator for which he might sell them. He was to make monthly returns to me of his sales, & remittances were to follow.

X Q. 47. Was this a shop or territorial license?

A. He could sell them anywhere in the U. S.

X Q. 48. How much have you received from him since you gave him that license on a/c of sales?

A. I think about $2,500.00.

X Q. 49. Do your books show the amount rec'd?

A. My books relating to Mr. Halterman's business are kept partly in

one set of books & partly in another. They do show the amount that I have received from Mr. Halterman, every dollar.

X Q. 50. Did you receive money from him on any other a/c whatever than for the machines sold by him under said license?

A. Yes, sir; I have.

X Q. 51. On what a/c was it?

A. Mr. Halterman sold, prior to taking out this license, some
259 30 or 40 machines of the same character as he has made under the license, and sold them to millers about the country at a less price than my established prices. Mr. Halterman agreed to refund to me all over $40 for No. 2, & '50 for No. 3, which he had sold them for.

X Q. 52. Do you know who manufactured the machines which he sold?

A. He claimed to manufacture them himself.

X Q. 53. How much did you receive from him on that a/c?

A. I received from him about $1,500 or $1,700.

X Q. 54. Wherein did these last machines differ from those he is manufacturing under the license?

A. They were the same thing.

X Q. 55. How came he to manufacture them without authority from you?

A. I can't say.

X Q. 56. Did you receive from him any money on a/c of sales made by him of what is called in this case the Vaughn machine or machines manufactured by the defendants?

260 A. No, sir; I think not.

X Q. 57. Are you certain?

A. I am certain unless it be in reference to a recent matter of $50. He never paid me a dollar for on a/c of the Vaughn machine.

X Q. 58. After what plan or exhibit in this case are the machines that he manufactures under your license made?

A. It resembles the plan B, or the first 6 machines made by me, in its general plan of arrangement, more than any other of the exhibits.

Further examination adjourned till 2 p. m.

Master.

X Q. 59. State if you have collected any money from any person or persons at any time on a/c of machines sold by the defendants.

A. I don't know whether I have or not on any machines sold by the defendants as reported by them. I have collected $100 and interest on one machine manufactured by them at some time; it may have been prior to Nov. 29th, 1864.

261 X Q. 60. Of whom and when did you make that collection?

A. In Aug. or Sept., 1871; of a man named , in Edwardsville, Ills.

X Q. 61. Is that all the money you ever collected on a/c of machines manufactured by the def'ts?

A. I have collected further sums from millers in the West that were using the machines, the collection of which indirectly grew out of the use of the machine, but not in any way covered by the royalties claimed by me but grew out of a new contract between myself and the parties who paid the money.

X Q. 62. Was it money for the right to use said machine? If not, state fully what it was for.

A. I can't answer the question without explaining the w hole subject.

X Q. 63. Explain the whole subject.

A. In 1870 & '71 I instituted by different means the canvassing of the Western country to obtain as far as possible the number of Vaughn machines in use and who were the users. To all such persons as I found using or had used such machines I sent a notice that the
262 same was an infringement upon my patent as reissued to me in 1864, demanding of them $105 as my royalty, with interest, at the same time notifying them that if they continued the use of the machine for one week after receipt of this notice that they would be charg'able at the rate of $2.00 per week, as an extra charge for the continued use of the same, until my royalty was paid. On the strength of this notice, said party at Edwardsville, Ill's, paid the demand of $105 & interest, since which time no other parties have paid, except since the decision in this case a certain number of millers, considering themselves involved under this notice, perhaps all together 15 or 20, have entered into a compromise arrangement with me by my releasing to them my alleged claim under the 2$ per week by which I agreed to release them from the same upon the payment of a certain amount of money.

X Q. 64. Upon the payment of this money by them, required in your said notice or by said agreement last referred to by you, were the parties entitled to continue the use of the said machines the same as
263 if they had been purchased of you by them?

A. They were by my agreeing to take my chances for the recovery of my royalty from the parties whom I had sued for the same. I was to let them alone thereafter.

X Q. 65. Now state clearly and distinctly for what these payments were made to you by them men.

A. Paid to me by a recognized claim under my notice above referred to $2 per week, &c.

X Q. 66. Now state what the $2 per week was for.

A. The two dollars per week is for use of the machine under a new contract entered into on their part by the acceptance of the conditions of said notice.

X Q. 67. Now, Mr. Booth, state if this payment by these several men in the manner you have above related was not to be or received as a compensation for the use of said machine under your claimed patent.

A. Without the patent the claim couldn't have originated; can't say that the payment was based upon compensation for use, though
264 as I said before the claim couldn't have been set up without the patent. In any of these cases alluded to, when parties have paid any thing under this notice, I do not know whether the machines were manufactured by the defendants prior or since 1864.

X Q. 68. If this payment or agreement to pay on said settlement with said men was not based upon compensation for the use of the machines, then tell us what on earth it was based on.

A. I had answered the question, I supposed, before in my answers, if I can make it any more clear I am ready to do so.

X Q. 69. Was it not, Mr. Booth, a mode resorted to by you to obtain a royalty for the use of your patent?

A. The notice sent to these millers in the first place was—I will ask what you mean by mode?

X Q. 70 I mean by the question compensation for the right to use a machine which you claimed was an infringement on your patent.

A. It was under the new contract.

X Q. 71. You have spoken of sending notices to various per

265 sons to whom you refer; state whether those notices were written or printed, or both, & sent in the form of circulars to the persons.

A. The notices were in print generally I guess addressed in writing.

X Q. 72. Look at the paper now handed you marked by the master Ex. Circular & Notice, & state whether that is one of said notices, or one like those notices; and state whether you sent this one or caused it to be sent to the party to whom it is addressed.

A. The notice I recognize as such with the exception of the pencilling, which I know nothing of. I sent this notice to the person to whom it is addressed.

X Q. 73. Now state how much money in all you have received, or have received and have contracts for, from any and all persons whomsoever, for the use of machines claimed by you to be an infringement upon your patent, at any time since the 29th day of Nov., 1864, except such as you have heretofore stated to have received of Halterman; stating the persons of whom you have received the same, how
266 much from each, and when received.

A. I don't claim that I have received any money for the use of the machine except in the case of the man at Edwardsville, Ills., before mentioned.

X Q. 74. I did not ask you what you claim. I now ask you again to state how much money you have received, and have received and have contracts for, from any and all persons whomsoever, with the exception above, not as to Halterman, who have used a machine or machines which you claim to be an infringement on your said patent, since the 29th day of Nov., 1864.

A. It won't vary much from 2,000$, all told.

X Q. 75. Have you books showing an $\frac{a}{c}$ of the same or any part of it?

A. I have books showing part of it.

X Q. 76. Will you produce them to be examined by the master com'r in this case so far as they relate to said $\frac{a}{c}$ of money rec'd?

A. Not unless I am required to do so by my counsel.

X Q. 77. State the name and residence of each person of whom
267 you collected any portion of said $2,000, the amount collected of each, when received, and how many machines used by each of said persons?

(Objected to by complainant.)

A. I refuse to answer the question unless directed by my att'y to do so. Upon reflection I have concluded to answer, nevertheless objecting to the question. In July, '74, I received from E. S. Goddard, of St. Louis, $150. He had then in use & had had in use in another mill 3 No. 3 machines, as he represented to me. I never saw them. I received about that time of Mr. Henry Kalbfleisch, St. Louis, $200; said to have two Vaughn separators. About the same time received $236 of Leonhardt & Schuricht, St. Louis. These parties had one Vaughn separator in use and one St. Louis Zigzag separator, manufactured by A. K. Halteman, of St. Louis. Received about the same time $210 from Geo. Baine, of St. Louis, who acknowledged having 2 Vaughn separators in use. Received $100 from one Schimbler, of St. Mary's Landing, Ills., through the hands of his ag't., Tath, Ewald & Co., St. Louis, acknowledged to be a Vaughn machine; don't know No. Received $150 from one Schimbler, of Mascoutah, Ills. This was
268 later by a month or so; said to be a Vaughn machine; didn't see it. Received $200 about Sept., from Winholdt & Son, and Esmel,

Winholdt & Son, of St. Genevieve Co., Mo.; 2 Vaughn machines; 1 each company. As to the rest, cannot give the exact amounts, but will furnish dates, persons, & amounts as soon as I get home, and send to the master.

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In answer to defendant's att'y asking for further report, continuation of answer to X Q. 77.

I herewith send balance of my report on testimony, which I agreed to furnish the master upon my cross-examination, relating to my receipts from different parties referred to, and where my testimony left off:

Sept. 23d, 1854.	Tho's Y. McEnnis, Bunker Hill, Ill		50 00
Oct. 10,	"	David Suppegied & Co., Highland, Ill	100 00
" 13,	"	Leonard & Sewall, can't now give res	90 00
" 14,	"	J. F. Schwegman, Washington, Mo	100 00
" 17,	"	Berry & Becker, Collinsville, Ills	100 00
" 17,	"	Henry Herman, Highland, "	105 00
Nov. 6,	"	James Miller & Co	105 00
" "	"	Geo. H. Brown, St. Louis	50 00
" 10,	"	E. H. Meirs, can't give res	50 00
" 19,	"	C. H. Kahnke, Shoal Creek Station, Ills	100 00
" 21,	"	Alt & Brown	50 00
	This is all I have collected		900 00

269 As to the kind & number or date of manufacturing of any of the above separators I have no proof or knowledge except that the $500 cases are I believe for St. Louis Zigzag separators, manufactured by A. K. Halterman, and this is where the millers made up the price to my prices, as they bo't of Halterman and he made them prior to a license and made up the balance to me, as referred to in my testimony.

X Q. 78. Have you instituted any suit or suits, and have now pending against any person or persons for the use of the Vaughn machines, or parties to whom the Vaughn machine has been sold by defendants?

A. I have not as, I understand it.

X Q. 79. In estimating your time spent in this case, in your examination in-chief, was that statement made from any a/c you have kept of time spent, or merely a guess?

A. It is, according to the best of my recollection, not made from any a/c.

X Q. 80. What business have you been engaged in the last year and a-half, other than dealing in your machine?

270 A. Have been engaged in no regular business. I have incidental matters of considerable importance to look after.

X Q. 81. Have you any a/c of the money which you stated in chief you had expended in the prosecution of this case?

A. I have of a portion of it.

X Q. 82. Where is it?

A. At Rochester, N. Y.

X Q. 83. Will you produce it for inspection by the master?

A. I will sometime hereafter, & before close of ex.

BOOTH *vs.* PARKS.

Statement called for by defendant's att'ys, attached as part of answer to X Q. 83, in answer to defendant's question (X Q. 83,) "Will you furnish the items of expense, which you name in gross as expended in the prosecution of this suit, other than paid att'ys & legal or taxable costs for depositions," &c.; also exclusive of my time.

Jan'y	20, '72.	No. 1	Expenses self & Mr. Casey to Akron	50 00
"	" "	2	Copies patents, Washington	1 75
Jan.	31, "	3	" " "	35 75
Feb.	3, "	4	" testimony, paid Winslow Akron	10 00
"	" "	5	" patents, Washington	15 00
"	26, "	6	" express on models	1 25
271				
March	2, "	7	Cast of models, with repairs	75 00
June	12, "	8	Return of 4 boxes models from Cleveland, 1.75 each way	3 50
	20, "	9	Paid E. Andrews printing pamphlets, testimony	43 25
July	24, "			
	1873.			
March	24,	10	For tel. to Cleveland	1 50
May	30.	11	Expenses self & Perkins Pittsburg, give deposition	50 00
		12	Expenses of, or charges of, counsel in taking testimony, extra from counsel's fees, 6 days, not less than 50 dollars per day. Bills not rendered—Willey, Casey, Cogswell & Perkins, 2 days more not included	300 00
Feb.	18, '73.	13	Paid expenses self, models, to N. Y. to try Baxter's case, which was, by stipulation, to decide the Parks case in nor. dis. Ohio	37 20
March	4,	14	7 tel. within one week	3 90
	14,	15	Paid expenses of self & Cogswell to Cleveland for trial	60 00
"	"	16	Paid Cogswell for his advances to Bishop, of N. Y., to watch trial	25 00
"	"	17	Express charges on models	1 50
		18	Paid Willey, stenographer	5 00
April	2.	19	Trip self, Cleveland, in case	30 00
"	9.	20	Check to Willey for stenographer	40 00
272	1874.			
May	9.	21	Tel.	75
		22	Other incidentals, for telegraphs, stationery, &c.	25 00
Dec.	3d, '74.	23	Expense on examination before master, Rochester & return	30 00
		24	Twice before on same business	60 00
				$905 35

X Q. 84. Since 1864 have there been other competing machines in the market for separating grain?

A. There are other grain-separating machines in the market.

X Q. 85. Have you sold any territorial rights of your patent?

A. I hav'n't sold anything since Nov., 1864.

Further examination adjourned till Dec. 3rd, 9.30 a. m.

Master.

Met pursuant to adjournment, Dec. 3rd.

Master.

R. X 1. Was the Vaughn machine you refer to as being seen in 1859 like the machine represented by the Vaughn patent & model in the Patent Office?

A. It was.

273 Re. X 2. Have the Vaughn machines or those manufactured by the defendants since then, and represented in Exhibit C, been like the machine you then saw in 1859? If different, in what respect different?

Ans. They are not like it; they are different. The one I saw had the sides of the sieves all boxed in, there being only one end exposed and the sieves could not be cleaned except by a brush with a long handle, a

plan that is entirely impracticable. This is now seen in the model at the Patent Office, as well as shown in Vaughn's assigned patent now in the case, although one side has been stripped off or left off by the draughtsman in one view of it, in order to show the sieve arrangement. The model shows that these sides are to be fixtures, and necessary to the preventing of the oats from falling outside the machine. In the manufacture of the Vaughn machine and introduction of this boxing up was obviated and the machine made and sold as represented by Exhibit C. I stated in my cross-examination that I have never made any machine like Vaughn's; what I meant was that I never made one with the sieves boxed up like the one I saw in 1859 in the shop, and as represented in Vaughn's patent; those he and the defendants have since manu-
274 factured, or were manufactured up to the commencement of this suit, are substantially like mine, and the first machine I saw was substantially like mine in every thing except the boxing up.

Further examination adjourned till—

Master.

FEB'Y 16TH, 1875.

Pursuant to notice, met for further examination & hearing.
Present, Geo. Willey for complainants.

Master.

FEB'Y 16TH, 1875.

Hearing adjourned till 9 a. m., Feb'y 17th, 1875.

Master.

FEB'Y 17TH, 1875.

Pursuant to notice, met for further examination & hearing.
Present, Geo. Willey for complainant.

Master.

FEB'Y 16TH, 1875.

Hearing adjourned till Feb'y 18th, 1877.

Master.

FEB'Y 18TH, 1875.

Pursuant to notice, met for further examination & hearing.
Present, Geo. Willey for complainant.

Master.

275 Adjourned till March 23rd, 1875.

Master.

MARCH 23RD, 1875.

Pursuant to met for further examination & final hearing.
Present, Mr. Willey for complainants & Mr. Bakewell for respondents, and upon the showing of Mr. Bakewell that owing to his illness the defendants were unable to take testimony as per notices served thereupon the further examination & final hearing were adjourned till Tuesday, 10 a. m., April 13th, 1875.

Master.

APRIL 13TH, 1875.

Met pursuant to adjournment.

Master.

J. L. BOOTH, further examination, recalled by Mr. Kerr:

X Q. 1. Is your contract with or license to A. K. Hatterman a written one?

A. It is a written license; it amounts to a contract also, all embraced in the same thing.

X Q. 2. Please produce it.

A. It is not here now; will send for it.

276 X Q. 3. What is Mr. Hatterman's business.

A. He is a mill furnisher and millwright, and a manufacturer of mill machinery.

X Q. 4. In the sale of mill machinery manufactured by him, what course does he have to pursue?

A. Can't tell you, only on presumption and general knowledge.

X Q. 5. What answer can you make on presumption and general knowledge?

A. I know that men in that business do advertise their business. They advertise it in the form of pamphlets, resorting generally to the same means for placing their goods before the public that manufacturers in general do.

X Q. 6. Does your estimate of the cost of the machine, in answer to question 1, include the cost of introduction, sale, & interest on capital, and so on, original examination?

A. Very nearly, with this explanation, as near as 150 or $200 would relate to the introduction and sale of the machine during the whole lifetime of the patent.

X Q. 7. Please explain your answer more fully.

I misunderstood the question. The 40 or $45 which I paid for having the No. 2 & 3 manufactured does not include any of the costs of

277 sale and introduction or interest in capital.

X Q. 8. What was the cost price of No. 1?

A. The cost price of No. 1 was 75 dollars, to the best of my judgment. I will here state in reference to that machine, what there were made of them, parties manufacturing their own machines at their own expense, and paying me $150.00 each. All of that size of No. 1 machines that were manufactured were disposed of in the same way, with the exception of the first one, which was manufactured by myself, or at my expense and under my direction, at Cuyahoga Falls, O., shipped to Rochester, N. Y., in the spring of 1859, and set up in Mr. Burbank's mill, and sold to him after it had been set in operation, the whole transaction being covered by a contract with said Burbank, previous to its construction, whereby said Burbank agreed to pay all the expenses if the machine worked to his satisfaction & accomplished the object of separating oats from wheat. Said Burbank was satisfied with its operation and did pay said expenses.

X Q. 9. What did Mr. Burbank pay you?

278 I do not remember now the amount he paid me, but over $150.00.

X Q. 10. Who are the parties who manufactured their own machines?

A. Whitney & Hall, & Joseph Hall, of Rochester, N. Y.

X. Q. 11. What was their business?

A. Whitney & Hall owned the Frontier Mills, of Black Rock, N. Y.; & Joseph Hall was a manufacturer of threshing machines, of Rochester, N. Y.

X Q. 12. The $150.00 Burbank paid you was for expense of putting up the machine, was it?

A. The $150.00 that he paid me was for money expended by myself

in constructing the machine, and some other contingent expenses, like traveling expenses and disbursements incident to my expenditures in putting up the machine. It was not sold to him at any profit, nor any royalty charged.

X Q. 12½. When were these No. 1 machines made?

A. The 1st machine was commenced and completed within 6 weeks of the 1st of April, 1859. The others soon followed; manufactured
279 at Rochester, two of them before September, 1859, the balance very soon after that; can't give you the exact dates. I have reference now, when I say the first, large No. 1 machine.

X. Q. 13. What was your profit on the No. 283 machines manufactured by you, considering the general expenses of your business?

A. You mean on the machines manufactured & sold?

X Q. 14. Yes, sir.

A. I think in the aggregate in manufacturing & selling a 100 or more of machines, taking into a/c all that I had to contend with in the disposition of them, that there was very little made out of it, and in making that statement it is impossible for me to separate the legitimate introductory expenses from those thrown upon me by the opposing machine manufactured and sold by Turner, Parks & Co.

X Q. 15. Omitting the legal expenses, which I suppose from your last answer you included, what was your percentage of profit from the manufacture and sale of those machines?

280 A. I cannot give an answer under the rule of percentage.

X Q. 16. Well, give an intel'igent answer.

A. The rule I adopted was a selling price on an average of $100 above cost of construction, or what they cost me to get made; on the No. 2 machines $95, on the No. 3 105, on & so far as I sold $150 on No. 1; this included the right of use with each machine.

X Q. 17. What proportion of that $100 was profits on the basis of my last question?

A. It was all profit with the exception of the expense of one trip to Chicago & Milwauk'e, where I went and introduced the machine. The machine once introduced under that expense covered by an outlay of $150.00 was all-sufficient to sell all the machines I ever made, and would have so resulted had it not been for the legal and other embarrassments which I had to contend with in consequence of the appearance of the defendants' machine placed in the same market within a few weeks following my first introduction of this machine in its legitimate mar-
281 ket. In vindication of this statement the first machine that I took into the western country I exhibited at Chicago, Janesville, and Milwaukie, & sold the machine for $150.00 which only cost me $45.00 delivered in Chicago. I was absent two to three weeks and took orders for at least a dozen machines from the exhibition of the one.

X Q. 18. You applied for an extension of your patent, did you not?

A. I did.

X Q. 19. And filed a statement of expenses & receipts, & in that statement set out a great many items of expense attendant upon the manufacture & sale of the machine?

A. I did.

X Q. 20. Did you license any other party or parties beside Halterman, of St. Louis?

Yes, sir; I did in one sense, which I will explain. I gave permission to J. C. Richards of Chicago, in 1865, to manufacture and sell my machine, he agreeing, being in the mill-furnishing business to some extent,
282 and a machinist, to make the effort to sell the machine, solicit

orders, advertise it. I shipped him a machine to manufacture from as a sample. He made the effort without success.

X Q. 21. Did you license or settle with any other parties save those you have mentioned in this or previous examination?

A. None others, that I now think of, except as I have reported.

X Q. 22. Did you not give one Rakes of Rockport a license?

A. No, sir; not legitimately a license. I sold him a shop right to manufacture under my patent, under a contract; in no sense a license whereby he paid any percentage as a consideration or a patent fee.

X Q. 23. What was the consideration?

(Complainant object to the question as inadmissable.)

A. The value of the consideration has yet to be unfolded.

X Q. 24. It was not money, then?

A. No, sir. There is some money to be paid, a small consideration back yet; otherwise I have had my pay and am satisfied.

283 X Q. 25. Is it so expressed in the instrument?

A. It is.

X Q. 26. What is the consideration expressed?

A. The consideration nominally expressed, I believe, is $3,000.00; the balance remaining unpaid is $500.00.

X Q. 27. Am I then to understand that you received $2,500.00 cash?

A. No, sir.

X Q. 28. What consideration did you receive, then, which is represented by $2,500 in that agreement?

A. The consideration is of that nature that it constitutes a moral obligation between Mr. Rakes and myself, and for that reason, and as he so understands it, I would not feel justified, unless I am legally bound to do so, in making an exhibit of a private and confidential bargain, but if I do not realize anything from what he has given me, which is my loss, and if I realize $10,000, which I may, it is my gain.

284 X Q. 29. Now please state if the additional $2,500.00 was not inserted in that agreement at your request for the purpose of conveying the impression to the public that you received $3,000.00 for that license.

A. No, sir; but, on the contrary, Mr. Rakes came to me and wanted to buy the right to manufacture a Jewel separator, a zigzag machine patented in 1874 by Jewell Bros., of New York. I heard that Mr. Rakes was about to commence manufacturing that machine at Lockport last fall from a circular handed to me. I at once discovered from the cut on the circular that it was no more nor less than Booth zigzag sieves, consisting of 2 sets or a double set. I at once—the next day—went to Lockport, notified Mr. Pux that that machine was an infringement upon my patent. He had then manufactured 5 machines. After from 4 to 6 weeks' consideration, Mr. Jewell came to me himself, and Mr. Rakes, and wanted to know what arrangment they could make with me. I told them the only arrangement they could make with me was to buy a shop-right to manufacture as many as they wanted to during the next five years, the duration of my patent. The Jewell machine was

285 a very expensive machine to construct, the smallest and cheapest of which could not be made for less than $125.00, and the largest size $150 & 175. Mr. Rake claiming that he could not sell many of those machines, in his opinion, in consequence of the prices which he would have to put upon them, he said if he manufactured them at all he would have to pay Mr. Jewell a license fee, and considering the machine would have to be sold, if at all, to a limited number of the first-class mills in the country; therefore, considering the few years left of the patent and

the disadvantages under which Mr. Rakes would have to contend, I offered to sell him the shop-right for $3,000. He could not raise the money. Mr. Jewell would not advance it to him; therefore I accepted his transfers of valuable considerations at the figures named. I will further state that I would not be deprived of my prospective interest or recovery the sum of $3,000.00 in cash to-day.

X Q. 30. What was the feature of the Jewell machine which
286 you considered an infringement?

A. A series of zigzag sieves and boxes or return boards with a lateral shake motion, two separate distinct sets operating in the same way; also the same in combination with a fan and spout, the whole thing being substantially the same.

X Q. 31. Suppose your machine were provided with an end shake, would that be in your opinion within your patent?

A. It is not, unfortunately for me.

X Q. 32. What would be the comparative value in efficiency of a machine provided with a side and an end shake?

A. The most complete and effective machine made under my construction of the zigzag sieves, as well as Vaughn's, can be had from the lateral shake-motion, the same as represented in my patent. Machines, however, constructed to shake the other way, can be made to operate advantageously, so to speak, performing good results, sufficient to answer a very good purpose where others cannot be had; and this is explainable further: you cannot use narrow sieves with the same inclina-
287 tion, narrow sieves with great inclination being the most desirable and effective. The end shake shaking the whole nest of sieves in a direct horizontal line drawn at right angles to the attachment of the shaker, producing a motion having the effect, when shaken rapidly, of a knocker to knock the wheat from the sieve entirely at every blow. End-shake machines to obviate that difficulty must be mounted on legs, so that the sieves, being at quite a distance from the center of action, partake more of a sliding or parallel sliding motion to the inclination of the sieve. The comparative value and efficiency of the two kinds of machines, end and side shaking, depend all upon circumstances.

Under some circumstances the end would be as valuable as a side shake, and that would be in spring-wheat countries, where no other machine was known for separating oats from wheat, such would be the demand and sale they would sell at as large a profit; but under the same circumstances and conditions, all considerations, a machine constructed like mine and like Vaughn's would have the ascendancy with the lateral shake motion.

Under the last explanation of my answer, I would consider that
288 the side shake has the advantage of the end shake of 3 to 1. I will further state that there are other advantages in favor of the side shake which I have not named, as applied to my system of zig-zag machines.

X Q. 33. Do you mean that it would clean grain twice as well on an equal test, and sell for twice the profit of the end-shaking machine?

A. No, sir; I think I could sell twice the number of machines at the same price; that it would clean oats from wheat *preceptuly* better, with more economy or less waste of wheat.

X Q. 34. Are you acquainted with any separator in the market having an end shake?

A. I have seen such machines.

X Q. 35. Barnard & Lees', manufactured at Moline, Ills.; I saw one of them in operation at a mill in Chicago at one time.

X Q. 36. Is it not a fact that that machine is a first-class separator.

A. I can't say whether it is or not; I should judge, however,
289 that inasmuch as it has had a large sale, and inasmuch as it involves substantially to a certain degree my invention, as I consider it, but not covered by my reissued patent, it gave very good satisfaction. The operation of the grain through the sieves so far as running it repeatedly over narrow surfaces, with small perforations in the surfaces, with continued use of intermediate return boards, and the shaking sieves being mounted upon standards, so that the objection to the end shake is partially obviated by the motion being more in line with the plane of the sieve than it could be if applied to the Vaughn or the Booth machine, that the machine would do very good work.

X Q. 37. And this machine is a successful machine and a saleable machine, even though it does have the end shake, which is so objectionable to you; is that the case?

A. The machine is sold largely through the *the* influence of a large percentage, amounting to 20%, paid to the millwrights of the country for selling it. This I was told by Mr. Lees himself, the manufacturer.

290 X Q. 38. Has it not run all other machines almost entirely out of the market?

A. I think not; it may have run one manufactured by Turner, Parks & Co., made very near like it, with an end shake, out of the market; if so, I consider it owing to the system adopted by Barnard & Lees of paying large commissions to millwrights, who sell these machines to the millers, the millers not knowing that said millwrights are thus interested in their sale.

X Q. 39. State whether the Moline machine has the zig riddle.

A. The sieves, I think, all incline in one direction.

X Q. 40. Why are you so averse to producing your contract with Halteman?

(Complainant objects to question, as it assumes what is not shown.)

A. In the first place, I have before stated the substance of the contract and license; secondly, the license is not here, but in Rochester, N. Y.; thirdly, defendants have had an opportunity, and now have, of examining Mr. Halteman; fourthly, that I if did so I would con-
291 sider it volunteering to assist the defendants in the defense of this case, therefore, and being further endorsed by my counsel that I am not legally bound to do so.

X Q. 41. Did you not say this morning that you could and would telegraph for it to Rochester, and could have it here to-morrow?

A. I did say so, but upon reflection considered part and parcel of the same line of evidence that was sought by the defendants to introduce by me when they called upon me in my first cross-examination to produce my books in this case, and remembering that I was then advised by my counsel that I was not legally bound to do so, and that after I made the assertion this morning Mr. Willey, my counsel, came in and advised me that I need not furnish it; and further remembering that when Mr. Parks was requested by me to furnish a statement from Baxter, of Chicago, they declined doing so on various excuses not considered satisfactory by me; therefore I don't feel called upon to volunteer this spirit of accommodation.

292 X Q. 42. What offset do you allow Halteman for sales and other expenses, besides the cost of the machine?

A. Don't allow him anything.

J. L. BOOTH.

(Indorsed:) 2249. U. S. cir. court. J. L. Booth vs. Turner, Parks

& Co. Booth's depositions taken before master. Hearing on damages. Filed Nov. 24, '75. Chas. H. Bill, dep. clerk.

293 G. B. TURNER, being duly sworn, says as follows:

Q. 1. State whether you are one of the defendants herein.

A. I am.

Q. 2. State whether in the manufacture of the Vaughn machine you considered yourself as infring on the Booth patent.

(Complainant objects as immaterial.)

A. We never considered ourselves as infringers.

Q. 3. State some of the advantages of the Vaughn machine as manufactured by Turner, Parks & Co.

A. One of the advantages as a grain separator was the short fan that it had, the riddles being entirely unobstructed by any spouts, either attached to the riddles or the main wind trunk, leaving the riddles at all times accessible to be cleaned off; and another advantage was the construction of the cockle-riddle and cockle board, by means of which the cockle-riddle could at all times be cleaned.

Q. 4. State what advantages arose from the short fan.

A. I know from practical experience that a long fan cannot be supplied with air.

(Complainant here enters an objection to all questions in regard to advantages of the Vaughn machine, on the ground that persons who have used the machine are better qualified to judge.)

(Answer continued.) The length of fan that was ordinarily used in the Vaughn machine was about 19 or 20 inches in length, and
294 not far from that in diameter. In the construction of the three different sizes of machines, Nos. 2, 3, & 4, the fans varied but very little in length, which enabled us at all times to make a machine of large capacity without adding to the length of the fan.

Q. 5. How did you increase the capacity of the machine?

A. We increased the capacity of the machine by adding to the machine or to the riddles in a direction contrary to which the grain run. In the direction of the motion of the grain the riddles were never increased much on any sized machine, but in a contrary direction we could increase them to any required length to get capacity.

Q. 6. Where is the fan supplied with air?

A. At the end or eye of the fan.

Q. 7. If the length of the fan is much greater than its diameter will it effect or make a perfect operation on the grain?

A. It will not.

Q. 8. That advantage arises from having the screens unobstructed at the sides of the machine?

A. The lighter the riddles are the more freely that stroke; a rapid-shaking riddle must be kept as free from incumbrances of that kind as possible.

Q. 9. In reference to the exposure with a view of cleaning?

295 A. The riddles were entirely free and could be approached at all times on all sides without obstruction.

Q. 10. Is this desirable in grain-cleaning machines?

A. Yes, sir, very; must be cleaned many times a day.

Q. 11. Are you acquainted with the defendant, J. L. Booth, upon which this suit was brought?

A. I am very familiar, although I suppose I have never seen a machine exactly constructed after his patent, but have seen his model.

Q. 12. State the difference between the machine shown in said patent and the Vaughn machine as constructed by Turner, Parks & Co.

(Complainant objects to that as improper, as both the patents and models are in the case and show for themselves.)

A. In the machine as patented by Mr. Booth half of the riddles discharge towards the fan spout, the fan spout passing up in front of them; a long fan is shown; while in the Vaughn machine the fan spout passes at the ends of the riddles. These are the main features of the difference of the machines in their practical construction. I might say that
296 in the Booth machine as constructed under this drawing, spouts for carrying off the offal from the riddle became absolutely necessary to its operation. If this offal was not carried off by the spouts it would fall upon the fan spout and fan case and would practically stop the operation of the riddles, while in the Vaughn machine no such difficulty could occur. The attachment of these spouts in the Booth machine was cumbersome, added to the weight of the machine, and were shaken with the riddles; the whole thing was difficulty of access.

Q. 13. What about the cockle riddle?

A. Well, I can't tell anything about the cockle riddle; from the drawing it does not seem that it could be cleaned off. If it can't be cleaned off it would be worthless.

Q. 13¼. State whether all the features of advantage of the Vaughn machine mentioned by you and of its difference to the Booth patent were of use to the defendants in making sales of its machines.

(Objected to upon the ground that the witness has said that he never saw a machine on sale or in the market.)

A. I suppose there is no doubt but that these differences in the
297 construction of the two machines rendered our machines popular in the market and saleable. I wish to be understood at all times as speaking of the machine which Mr. Booth patented and not the machine which he manufactured.

Q. 14. Give your experience in the manufacture and sale of grain-cleaning machinery, and your knowledge in regard to the same.

A. I began grain-cleaning in the fall of 1852 and have been engaged in it ever since. Have travelled & operated grain-cleaning machines in most all of the grain-raising States, North, West and South. I have seen most all the various grain-cleaning machines that are in existence; have had experience in what is called the force-blast and the suction blast, the long fan and the short fan, the side shake and the end shake. Have also seen machines running from one riddle up to five riddles. Have tried all shapes and sizes of holes on riddles.

Q. 15. Upon what does the separation of oats from wheat especially depend?

A. It depends mainly upon the size of the holes, the inclination
298 of the riddles, and the vibration given to it, together with a judicious blast—very largely upon the size of the hole.

Q. 16. State when in the Booth machine as shown in the patent the blast begins to operate upon the grain.

A. As quick as the grain enters the blast spout, after it leaves the screen.

Q. 17. State whether in the sale of the Vaughn machine you travelled and made efforts for its introduction.

A. Yes, sir; most constantly, for 7 or 8 years.

Q. 18. Did you encounter and overcome any difficulties in the sale and introduction of this machine?

A. I was always quite successful in making machines give satisfaction

I often made long trips in new sections where the machine was not known. It always takes a great deal of time and expense to introduce a new thing. There has always been a great deal of competition in grain-cleaning machines from my first knowledge of them, and that competition has made it very expensive to introduce and sell.

Q. 19. Was the Vaughn machine regarded as a new machine by those whom you came in contact with?

A. When we first commenced the introduction of it it was new.

299 It was regarded as new by the public. That is, there was nothing particularly new about it, except that it had more riddles than were ordinarily used.

Q. 20. State, as nearly as you can, what your profits were on the manufacture and sale of the Vaughn machine.

A. That is a very difficult matter to do. My impression of it is that we never made over from 15 to 20 or 25%. I know there was one year that we never made a cent in the manufacture of grain-cleaning machines. Mr. Parks kept the books, and has made his statement, and that is as near as we can get to it.

Q. 21. State whether you manufactured the Vaughn machine under a patent.

A. Yes, sir; we certainly had a patent from the Patent Office which authorized us to manufacture what we did.

(Complainant objects to answer because the patents and models in the case show for themselves, and the witness does not profess to be a patent expert.)

Q. 22. Are you acquainted with the machine manufactured by J. L. Booth?

A. I am.

Q. 23. State the light in which you regard it in reference to your patent.

A. I have always regarded it as an infringement, and a very inferior machine.

300 Q. 24. Have you been in all your dealings in reference to the machine manufactured by Mr. Booth consistent with this idea?

A. I have, sir, always. I desire to say here if it is proper that in all my dealings in the sale of our machine I have never said one word against the machine patented by Mr. Booth; have never thrown a straw in his way.

Further taking of testimony adjourned till 2 p. m.

Master.

Pursuant to adjournment examination resumed 9 a. m., Ap'l 28th.

Master.

Q. 25. State whether, if the time given by you to introducing the Vaughn machine were charged, what effect would it have upon the profits as estimated by you; what I mean is, if instead of doing this work yourself you had employed a person at a salary commensurate with the nature and requirements of the work.

A. We have not considered any such element in the calculation of profits. If we had employed an agent in this capacity it would have materially changed the percentage of profits; I did this business of travelling mainly myself in the early part of the introduction of this

301 machine; within the past 5 or 6 years I have traveled only occasionally. Within the last year or so we have been making some

effort to do no business through traveling agents under a salary; we find it very difficult to get men to travel under commissions at 20 or 25%. We did engage one man, we called him a first-class man, at 1,500 and his expenses, but owing to previous engagements he did not go to work for us. We estimated the whole expense of such a man at $3,000. We have generally estimated the expense of an agent (salary and traveling expenses) at $2,500.

Q. 26. State whether the profits which you have made on the Vaughn separator are any more than the mere manufacturing profits, such as you generally make on unpatented machines.

A. We never supposed that we were making anything more than a fair manufacturing profit, taking everything into consideration.

Q. 27. Please state the difference in efficiency and saleable value and cost of manufacture between a Vaughn machine or a Booth machine having an end-shake, and a similar one having a side-shake.

302 A. There is really no difference whatever between a side-shake and an end-shake of a set of zig-zag riddles; that is in their efficiency in cleaning. I know this from practical experience. We built a zig-zag machine as an experiment, and shook the riddle endwise, and we came to the conclusion that there was no practicable difference as to the result of its cleaning or separating.

There is a difference in the cost of manufacture. A machine made or constructed as the Vaughn machine and one constructed like the Booth patent, the difference in the cost of manufacture is decidedly in favor of the Vaughn machine. I don't know in a machine made as Booth's is that the end-shake or side-shake would make any difference in the cost of construction. I don't know as the end-shake or side shake would make any difference in the saleability of the machine.

Q. 28. Do you know of any machine having an end-shake?

A. Yes, sir; the Moline machine, as it is termed, has an end-shake. We build a machine that has an end-shake. I believe the Hutchinson machine has an end shake.

Q. 29. Are you acquainted with the operation of the Moline machine?

A. I am. Have seen a great many of them in operation.

Q. 30 How does it operate?

303 A. I regard it as one of the most efficient oat-separators in use, and is so regarded generally by a great many who use it.

(Objected to on the ground that the witness has not stated that the Moline has zig-zag sieves, and that it has no bearing upon the case at issue.)

Q. 31. Describe the Moline machine, as regards the screens.

A. The Moline machine has what we term the zig riddles and directing board. The zig-riddle machine is where the riddle inclines in one direction, and the directing boards in another direction; these riddles have an end shake.

Q. 32. Is the effect of the zig riddles upon the grain similar to or different from the effect of the zig-zag, whether shaken laterally or endwise?

A. They have the same effect, so far as I know.

Q. 33. Is the Moline machine a prominent machine?

(Objected to by complainant as entirely irrelevant.)

A. It is a very prominent machine in the West—the spring wheat section.

Q. 34. Is the machine manufactured by you which has an end shake a successful machine?

(Complainant objects as irrelevant to issue.)

304 A. Yes, sir; the machine gives general satisfaction.

Q. 35. Are you making and selling it?

A. Yes, sir.

Q. 36. Of late years have you made and sold the zig-zag machine to any extent?

A. We have not sold the Vaughn machine to any extent for the last 5 or 6 years.

Q. 37. What is the reason for the falling off of sales?

A. We found the competition of the Moline machine so great in the West that it wouldn't pay us to sell the Vaughn machine with a force blast.

(Objected to by complainant as irrelevant.)

Q. 38. Describe the effect of the lateral and the end shake upon the grain.

A. The main difficulty that I have always found with the zig-zag lateral shake is to keep the grain properly distributed upon the riddle. They have got to be perfectly adjusted as to motion one way and the other, or the grain will incline to one end of the riddle, and incline to run off and over the riddle, and thus produce a waste. This is a difficulty that I have always found in the lateral shake. The same difficulty does not exist in the end shake where the shake is in the direction of the running of the grain.

305 Cross-examination:

X Q. 1. You state in your direct examination in answer to question 17, that you were engaged in the introduction of the Vaughn machine most constantly for 7 or 8 years. When did the 7 years commence and when terminate?

A. I have reference mainly to the time between 1861 and 1869.

X Q. 2. What effort did you first make and where was it?

A. My recollection is, that my first effort was in the West, I think Chicago, and I think in the year '61.

X Q. 3. Can you state whether you did or not?

A. I think I did; of course I can't now state that this is exact; my impression is that it is correct; I know that along in those days I spent a great deal of time in the West.

X Q. 4. What was your first move, what specific thing did you first do, in the introduction of the Vaughn zig-zag in the West?

A. My impression now is that about the first thing did was to appoint T. W. Baxter & Co., of Chicago, as our agent; I don't remember as to the particular machine.

X Q. 5. In your statement of the 7 or 8 years spent in the intro-
306 duction of the Vaughn machine, did it include all of your business efforts?

A. We were selling other grain-cleaning machinery.

X Q. 6. Please specify what other machinery.

A. Smutters and some warehous' separators.

X Q. 7. Did you meet with any success in selling these several machines just mentioned? and if so, more in one than another?

A. I couldn't now tell which we sold the most of in dollars and cents.

X Q. 8. What has been your principal business as manufacturer during the period from 186' to 1870?

A. We have manufactured the grain-cleaning machinery spoken of, some steam-engines, done a considerable business in sewer-pipe machinery, clay mills, and a general machine jobbing—paper machinery quite extensively.

X Q. 9. In 1860, '61, '62 & '63, what relation had the Vaughn sales in the aggregate to the other two grain-cleaning devices you have mentioned as selling at the same time?

A. My impression is we sold of the Vaughn during the period mentioned than of the other grain-cleaning machines.

X Q. 10. Can you give any general idea of how many?

A. I cannot.

X Q. 11. In what mill was the first Vaughn zigzag separator, and when, put up by you?

A. I can't tell you that unless you can suggest some fact to assist my memory.

X Q. 12. Go on and specify as well as you can the first instance wherein you were personally concerned and personally present in the introduction of a Vaughn machine in any mill in the U. S.

A. I can't now state; my memory as to those details is at fault.

X Q. 13. In your report to the master there is about 300 machines out of the 409 sold by Baxter, Tod & Halteman. What personal efforts have you or any of your partners put forth in the introduction and sale of those machines? and if any personal efforts state what they were, where they took place, and when.

A. When we were experimenting and perfecting the zigzag and zig machines we sent to Chicago and got 20 bushels of spring wheat of T. W. Baxter; the object of this was to determine the size of the holes to be used in the riddles of the zigzag, that being of first and primary importance; after a great deal of time being spent in getting the holes of the right size, we built quite a number of these machines
308 and sent them to Chicago, supposing them to be all right. Mr. Baxter sold some of these machines to the St. Louis mills; went there to put them up, and found the holes in the riddles too small for the wheat of that year. He sent for Mr. Vaughn; he went to St. Louis and rimmed out some of the holes, and after spending a considerable time and money all the riddles on those machines had to be changed and the holes enlarged. This was immediately after harvest, the grain of that year being larger than the grain of the previous year with which we had been experimenting. I speak of this as one personal effort made by the firm. I don't now recollect of any specific effort. I have simply this general knowledge, that there was a great deal of this kind of work in the sale of in the hands of our agents, the particulars of which I cannot now give.

X Q. 14. Was your company charged with any of the expenses from the introduction and sale of these 300 machines by their agents or dealers other than you have mentioned?

A. We paid those agents a commission of from 30 to 35 %, and paid our own expenses always for any incidental expenses of that kind.

X Q. 15. In what manner did you pay them a commission?

309 A. Mr. Parks in his answer on examination states, I think, that we charged them a net amount for the machines; my idea is that that net amount was fixed by allowing them a commission of from 30 to 35 %.

X Q. 16. Were they not in each case charged a specific sum for each machine which they ordered of you, and did they not sell the same at their own prices without any restraint or restrictions from you?

A. We had what we called a selling price; deducting the commissions from that selling price we arrived at the net sum that we charged our agents with for the machine.

X Q. 17. Did they ever account to you giving the prices at which they sold them?

A. They accounted to us for the net price at which they were charged for the machines; we don't know what they sold them for.

X Q. 18. Did you have any control over the terms of sale after they passed into their hands, or pretend to have?

A. No, sir; I don't know that we did.

X Q. 19. What proportion, other than you have mentioned as to your time spent in the sale of the 300 machines, of the 7 or 8 years
310 did you devote to the disposition of the other hundred machines unaccounted for?

A. I couldn't give you any very definite answer in regard to it.

X Q. 20. How long have you known the plaintiff in this case?

A. I have know Mr. Booth as a grain cleaning man since 1851.

X Q. 21. In what relation or connection do you refer to?

A. I refer to him as patentee of a machine in 1851.

X Q. 22. Can you describe the invention generally?

A. It was patented as a separator and winnowing machine, I think it was called. It had a fan, a spout, and a riddle.

X Q. 23. Did the Vaughn machine contain the same arrangement of short fan and spout referred to by you as was in the Booth first patent of 1851, before referred to you?

A. In the Booth of '51 a small machine would have a short fan, and a large machine would have a long fan. It had a spout somewhat similar to the Vaughn, but the Vaughn did not contain the peculiar construction at the top of the spout. It had one riddle with an end
311 shake. It has a peculiar arrangement in the top of the spout, a valve which the Vaughn machine had not, the object of which was to separate the chaff from the wheat in a chaffing machine by giving a different current to the air throwing it through the riddle, which was no part or object of the Vaughn machine.

X Q 24. Did not the Booth patent of '51 contain a fan, an upright spout, which performed the same operation, & for the same purpose as the spout and fan in the Vaughn machine?

A. No, sir. The Booth of '51 is a machine patented as a winnowing machine; is described as a machine that the air which is generated by the fan can be made to separate the chaff from the wheat and the screenings from the wheat similarly to the Vaughn. The Vaughn is not a chaffing machine.

X Q. 25. In what capacity, if any, were you connected with Booth's patent of 1851?

A. I acted in the capacity of a general agent for 3 or 4 years in the sale of machines & territory.

X Q. 26. To whom did you sell machines and territory, and for what purpose were the machines sold?

312 A. I commenced in the fall of 1852; traveled in Michigan, Wisconsin, Illinois, Ohio, Penna., Tenn., N. C., & S. C., and some in N. Y.; sold the machines generally to millers, although they were designed also for farmers.

X Q. 27. Was that machine advocated by you as an effective separator for the purpose of separating screenings, light wheat, and foreign seeds from wheat, as wanted by the millers of the country?

A. Yes, sir; the machine was a very successful grain separator.

X Q. 28. What did you do after you ceased selling this machine for Mr. Booth?

A. I think before or about the time I quit Mr. Booth I got up a sepa-

rator and smutter, combining with the separator or smutter a similar blast to the Booth patent of 1851.

X Q. 29. How did you combine the smutter with this machine?

A. I set the smutter right in over the fan in under the sieve.

X Q 30. Then you had in that combination substantially and effectively Booth's patent of 1851, did you not?

A. No, sir.

313 X Q. 31. Why did you ask Mr. Booth the privilege of combining the smutter with his separator?

A. I never did, sir. I want this distinctly understood now. Mr. Booth applied to me to put into my smutter just this form of spout as he had in his machine. I declined to do it for the reason that I thought I saw a trap that he was trying to get me into—combine with my machine the only patented feature of his, the valve and the peculiar arrangements of the spout for the purpose of discharging the heavy screenings. I was well convinced at the time that he had that object, that he might claim subsequently that I was an infringer. I therefore declined it. I never asked his privilege in the world.

X Q. 32. Then you avoided Booth's patent, did you, by some other device obtaining the same results?

A. In the several machines that I have invented for cleaning grain I have always endeavored to avoid the infringement of other machines; any parts of machines that were common property I suppose I had as good a right to as any one. My machine was not for the same object as Booth's; that is, I did not wish to use any valve in the mouth of my spout, nor the peculiar double bend that he has in his.

314 X. Q. 33. You obtained a draft through your machine, did you not?

(Respondents object as irrelevant and immaterial.)

No, sir; the grain did not receive any draft; did not propose to have it.

X Q. 34. Have you any circulars describing the action of that machine?

A. Not with me.

X Q. 35. Who was the first inventor of a short fan?

A. I do not know.

X Q. 36. What do you call a short fan?

A. I call a short fan one that is not long.

Examination adjourned till 2 p. m.

Master.

X Q. 37. In the machines which you sold for Booth, referred to, were there not short fans used, as you would term short fans?

A. No.

X Q. 38. How long was the shortest fan in those machines that you sold of the Booth patent prior to the discovery of the Vaughn?

A. Well, in the hand machines were about 15 or 16 inches long, and the diameter about the same.

315 X Q. 39. Well, that fan in that proportion was about the length of the fans as used by Vaughn, was it not?

A. Not far from the same thing.

X Q. 40. Then you don't wish to be understood as saying that Vaughn was the first person that applied short fans to the purpose of cleaning grain, do you?

A. I use the term short fan in connection with the Vaughn separator,

zigzag. Well, I say no. I would say that in small machines the short fan was used by Mr. Booth in his patent of 1851.

X Q. 41. In your opinion, would a fan 2 feet in length and 2 feet in diameter be out of proportion?

A. No, sir; I suppose not very much.

X Q. 42. Supposing it is 3 feet in length & 2 feet in diameter, what difference take place then, if any?

A. I think the fan would not be as efficient.

X Q. 43. In what respect?

A. I have found out from practical experience that if the diameter of the fan is say 2 feet and the length of the fan three feet, that the fan in its operation is very deficient at the center; that is, the screening'
316 are very much lighter at the center than they are at the end of the fan.

X Q. 35. Are you not aware that the wings of a fan are wider in the center than they are at the ends, and that is so to equalize the blast, or the deficiency that you speak of?

A. We have always constructed our force-blast fans with wings considerable wider in the center in order to equalize the blast through the whole length if possible, but have always found it deficient in long fans.

X Q. 36. Did you ever make a fan wing to what you call a long fan 2 inches in width at the ends and 8 inches in the center; or, in other words, did you ever try an experiment in which the difference was as great as that?

A. I don't think we did; the ordinary difference has been 2 to 4 inches.

X Q. 37. Did you ever make experiments with the eye of a fan when the diameter of the eye was three-fourths the diameter of the fan?

A. I don't think I ever tried and experiment when the difference was so great as that; usually the eye of the fan would be about one-half of the diameter of the fan.

317 X Q. 38. Do you or do you not know the diameter and length of the Vaughn fan as usually constructed?

A. It was different lengths and diameters in the different sizes; the length of the fan I might say never varied much in the No. 2 & 3. I don't know that there was any variation in diameter or length. In the No. 4 machine the diameter exceeded the length, I think usually 3 or 4 inches.

X Q. 39. From the construction of the Vaughn machine the fan could not be lengthened if desired without materially interfering with its economy of construction, could it?

A. If thought desirable it might be increased from 3 to 6 inches without materially effecting the economy of construction.

X Q. 40. What did you do after you got up your combined smutter and separator, towards its introduction?

A. Well, we made efforts to introduce it.

X Q. 41. Was your company formed at that time before you completed the machine?

A. I think it was formed about the time of the completion of that machine.

X Q. 42. Can you tell when your company was formed?

318 I believe our company was formed in 1856.

X Q. 43. Was not Mr. Baxter, of Chicago, selling your smutter and separator combined for some time; and, if so, how long before he commenced the sale of the Vaughn zigzag separator?

A. My impression is that in the fall of 1857 I became acquainted with

Mr. Baxter, which was some four years previous to the time he sold zig-zags; he may have had some in the spring of 1861.

X Q. 44. Do you remember the time, if there was a time, when the Vaughn machine was first exhibited in your shop as an oat separator and the first demonstration made, when there was a number of gentlemen invited in to see it operate?

A. I know about the time the machine was first put in operation, but I don't remember the circumstances; I think it was latter part of summer of 1859.

X Q. 45. Did you have anything to do with the construction of that machine called Vaughn's?

A. With the general construction of the Vaughn machine I had nothing to do.

X Q. 46. Well, when was the first oat separator completed by
319 you if the Vaughn was not the first, as I understood that Vaughn was a partner at that time and that his machine was got up at your shop?

A. We commenced in 1857, soon after the organization of our company, to experiment with grain separators; at first we built machines of two riddles, the riddles having one inclination, the riddle built somewhat after the style of the old fanning mill, the riddles removable at pleasure. We then got to increasing the number of our riddles. I think in 1858 we built something on the zig form, the riddles having one inclination and the directing boards a contrary direction, and think in the spring of '59 we completed the first zig separator with 5 riddles in it as an oat separator. Those were the first machines that I know of that were manufactured with the view of taking oats out of wheat.

X Q. 47. Are you willing to swear that this was in the spring of 1859?

A. It was either in the spring or summer of 1859.

X Q. 48. Where did this first oat separating machine which you
320 made go to; what became of it?

A. I can't tell you.

X Q. 49. Was it ever set up in a mill?

A. I suppose it was. In the fall of 1859, Sept. or Oct., the board of trade of Chicago offered a premium of a certain amount for the best farmer's fan to separate oats from spring wheat. Mr. Baxter was anxious that we should come in as competitors with the zig machine. We constructed one with 5 riddles and exhibited it at that trial; that machine is now in our shop. Previous to that we had completed this same kind of machine for milling purposes.

X Q. 50. The first machine for separating oats from wheat, which you completed, was it ever put into a flour mill, and if so where?

A. We were manufacturing oat separators as such, which were put into mills from 1858; on these 3 riddles we afterward increased them to 5.

X Q. 51. When did you first complete the first zig oat separator?

A. My impression is that we completed the first 5 riddle machine of the kind mentioned in the spring or summer of 1859.

321 X Q. 52. Have you and data by which you can fix these dates more accurately?

A. In the fall of 1859, I think September, the State fair of Michigan was held at Detroit; previous to that time we were at work at the zig hand machine. I left for Detroit before that was completed; it was to be forwarded to me or Baxter at Chicago to be used at that exhibition. I know that previous to the completion of the hand machine we had completed the mill machine. When I started for Detroit, Mr. Vaughn had

said to me that he would have another machine up by the time I got back. By the time I got back they had the zigzag in a state of forwardness, but Vaughn & Hunt were drafting I understood before I left.

X Q. 53. You were about starting for the State fair in Detroit in the fall of 1859. Did you go, or intend to go directly to the fair?

A. My impression is that I did.

X Q. 54. State if you please where the mill machine is or where it went that was made on the zig plan.

A. Can't say.

322 X Q. 55. The machine that you exhibited at the board of trade fair, Chicago, is now in your shop, is it, and in just the same condition so far as the sieves are concerned as it was when shown in Chicago?

A. Yes, sir; all material parts.

X Q. 56. Will you be so kind as to preserve that machine or prevent its destruction for a reasonable time hence?

A. Yes, sir; and take special pains I can to keep it.

X Q. 57. Will you at all times be ready to show that machine to the plaintiff herein?

A. Yes, sir; so far as I am concerned.

X Q. 58. I wish Mr. Turner you would describe that machine, as to whether it had a fan and spout in combination and what kind of a shake motion.

A. It had an end shake motion & a fan and spout similar to that we have in our zigzag.

X Q. 59. Now as to the return boards between each sieve, do they extend and return the grain to the upper edge of each succeeding sieve?

A. Yes, sir.

X Q. 60. What is the size of the holes?

323 A. Can't give you the size, but they were made as small as we could make them and get the wheat through.

X Q. 261. Mr. Turner, please state how the motion was applied, and at what velocity?

A. I think it was applied by a single eccentric, 2 throws to every turn of the driving-shaft—probably had about 700 or 800 per minute.

X Q. 62. What was the length of those riddles in the direction of the running of the grain?

A. They were about 1 foot square. The machine was made to run by hand, and was not designed more to show the principle of construction.

X Q. 63. You applied for a patent for that machine, did you not?

A. Yes.

X Q. 64. Was it after or before the application of Vaughn for a patent to his machine?

A. After.

X Q. 65. You remember Mr. Booth's coming to your shop in September 20th, 1859, to see the Vaughn machine?

A. Yes; came twice. First time he didn't see it; the second time he did.

324 X Q. 66. You declined, did you, showing the machine to Mr. Booth on his first application?

A. Mr. Booth came there, in the first instance, and rather made a demand to see the machine; said he understood we were making a machine that was an infringement upon his. I asked him if he had a patent; he said no, but he expected one. I told him then he couldn't see it. He came back in a few days, said he had his papers, and wanted to see it, and he did.

X Q. 67. What course did you pursue, you and your company, after that call of Mr. Booth, in regard to the Vaughn machine?

A. My impression now is that we went to work in order to perfect the machine.

X Q. 68. Well, how long after that visit was it that you considered it perfected?

A. I can't answer that definitely. I think it was some time that fall.

X Q. 69. Had the application for the patent been made?

A. I don't know.

X Q. 70. You say, then, that after Booth's visit there that no more
325 steps were taken with the Vaughn machine towards patenting it until after Mr. Vaughn had been to Chicago, in January, 1860, and returned, and very soon after applied for his patent?

A. We took steps to perfect the machine without any delay. Mr. Vaughn, for some purpose, went to Chicago, and reported that he saw a machine at the board of trade rooms, made by Mr. Booth, that almost exactly represented his machine; and soon after that we took measures to have the machine patented.

X Q. 71. Then the application for the patent must have been in January, 1860, or soon after?

A. I think it was.

X Q. 72. What did you regard as Mr. Vaughn's invention?

A. I would refer you to the patent papers for answer.

X Q. 73. Did you regard that you were manufacturing that machine and continued to manufacture it under Mr. Vaughn's patent and the subsequent reissue?

A. I supposed the machine was manufactured almost exactly in accordance with the model in the Patent Office, and we always con-
326 tinued to manufacture them without material variation, and supposed we were manufacturing under that patent.

Further examination adjourned till 10 a. m. Ap'l 29th.

Master.

APRIL 29TH.

Pursuant to adjournment, met for further examination. Parties present.

Master.

X Q. 74. Did you ever visit Washington in connection in any manner with Vaughn's patent about the time of its first issue?

A. I am under the impression that I visited Washington on behalf of this zigzag patent.

X Q. 75. Have you seen the model of Vaughn's patent?

A. I think I have.

X Q. 76. How is it with reference to the sides being opened or closed?

A. I have no recollection about it.

X Q. 77. Were you in Washington in September, '72, or at the examination and investigation by the Patent Office, regarding the ex-
327 tension of Booth's original patent (zigzag), and did you then see the model of Vaughn, and notice it as regards the sides?

A. I was there at the time referred to and the models of the two machines were there, but I have no recollection of it in regard to the sides.

X Q. 78. You have stated, have you not, that you never interposed any

obstacle to the interests of Booth regarding his first patent, have you not?

A. I state that I never have; in all my talk of the subject of the two patents I have always taken this position, that Mr. Booth abandoned the manufacture of his own patent and made a machine which we regarded as an infringement upon ours. Booth never to my knowledge since the obtaining of his letters patent presented to the public the form of a machine that he had patented. In resistance of the extension of his patent Mr. Soughton, our att'y at that time, took the position before the board that we interposed no objections to the extension of that patent, but only to the machine that he manufactured after he obtained his patent.

328 X Q. 79. Did you not, and did not Mr. Stoughton your attorney at Washington for this extension, secure all the models in the Patent Office at Washington that could be found having any resemblance whatever to V zigzag sieves found in Booth's patent, and then argue and set forth with all the ability of Mr. Stoughton with all your own ingenuity combined, with the express effort to break down Mr. Booth's pretended claim to zigzag sieves in general, without any reference to lateral shakes or any other shhakes, but on the other hand let the shake be what it might be, gyratory with all?

A. I don't understand that Mr. Stoughton took any such position; he said that he had no objection to the extension of the patent as he, Booth, had patented it.

(All matter regarding extension objected to by respondent.)

X Q. 80. Was not the same effort as described in my last interrogatory put forth by you in the trial of this case?

A. I would refer to the briefs and argument of the counsel in this cause for answer to that question.

X Q. 81. I understand from your description given, wherein advantages of the Vaughn patent are set forth, that the grand feature

329 obtained by running a spout up at the end left the sides open, so that the sieves could be readily cleaned. Have you not so set forth?

(Objected to because the witness testified to the advantages of the machine as manufactured by the defendant'.)

A. I have set forth that that was one of the advantages of the Vaughn machine.

X Q. 82. Don't you know that the Vaughn machine is a boxed-up machine without any exposure to the riddles, the only accessible point to the riddles except one end, and as thus described was so patented to Vaughn, and is described in the patent as having but one end accessible to the cleaning of the sieves & from that end with a brush?

A. Whatever was patented I would refer to the patent itself. I would further state that the machine has never been made in that form, but always like the Plaintiff's Ex. C in this case.

X Q. 85. Will you please answer my question? (Q. repeated.)

A. I supposed I had answered the question in referring him to the patent papers. I don't know that it is a boxed-up machine.

330 X Q. 86. Have you not and did you not in the early history of this Vaughn & Booth invention set forth & make prominent to the millers of the Western country the fact that Booth's machine as originally patented did not expose the riddles, but was obstructed by the trunk, & that he had forsaken his patent and adopted Vaughn's patent, which was a perfect exposure?

A. I generally carried with me, when talking upon this subject, cer-

tified copies of both patents, and have always made them the basis of any remarks that I have made, confining my remarks always to the characteristics of the machines as represented by those drawings; at the same time showing and claiming that Mr. Booth had changed the form of his machine so as to infringe upon the Vaughn patent, never at any time objecting to his manufacturing his machine as he had patented it.

X Q. 87. You pretended having the patents with you I suppose, did you not, to fully understand the specifications and claims set forth in both patents?

A. I suppose that I had a general idea of the claims and specifications of both machines.

331 X Q. 88. Your company brought suit, did they not, against Mr. Haltman for infringement of the Vaughn patent?

A. Yes, sir.

X Q. 89. On what point did you claim an infringement in that suit?

A. I have never seen the pleadings.

X Q. 90. Do you know what kind of a machine, and what it was called, and can you describe its general characteristics; that is, the machine of Haltman's?

A. I have never seen the machine nor the man.

X Q. 91. What do you judge was the fact, from your knowledge, was the character of the machine, and what was the character of the machine that Haltman manufactured, and on which this suit was predicated?

A. I know nothing of my personal knowledge, never having seen one.

X Q. 92. Who of your company does know?

A. I suppose Mr. Parks knows, and I know what he has said.

X Q. 93. What did Mr. Parks say?

A. Mr. Parks said that all the difference the' was between the

332 machine that Mr. Haltman manufactured, and upon which we sued him, and the Vaughn machine was that Mr. Halteman used square pins to pin it together and we used round, otherwise it was an exact copy.

X Q. 94. When was this 20 bushels of spring wheat spoken of by you shipped from Chicago to Cuyahoga Falls?

A. My impression is that it was in the spring or summer of 1859.

X Q. 95. In your statement in regard to the shipment of this 20 bushels of wheat you stated it as part of your expense included in your efforts of introduction, and also stated that you went to Chicago for the wheat; is that correct?

A. I don't recollect of making any such statement. At all events I didn't go.

X Q. 96. What, in your judgment, would cover the expense of the trip of Vaughn to St. Louis for the alteration of the machines there and those referred to in your answer as having been made with holes too small?

A. Probably one hundred and fifty (150) dollars might cover the expenses of that trip, saying nothing about his time.

333 X Q. 97. In these expenses, wheat-testing and going to St. Louis, and alterations—they took place prior to Nov. 29, 1864, the date of my reissue?

A. Yes, sir.

X Q. 98. Do you wish to be understood in your evidence before the

master that any of these expenses refer to the 300 machines heretofore referred to?

A. No; I wouldn't suppose any one would claim it.

X Q. 99. Machine sold to Lind & Batches, Feb'y 23rd, 1865, Canton, O., $200.00; what were the expenses connected with the sale of that machine aside from the cost?

A. I don't know anything about it, sir.

X Q. 100. In your statement to the master, when you say you have spent 7 or 8 years in the introduction of these machines, and could not give expenses, but stated that had you employed an agent to have done the work, and that his services would have been worth, in your opinion, $2,500 per annum, making a total sum of nearly $18,000, do you wish the master to understand that it cost $18,000 to sell 100 machines, yet was referred to as having been sold since 1864. You have given
334 all the specific expenses that you could think of regarding the sale of the other 300 machines, if so many there were sold, by Baxter, Todd & Halteman.

A. I don't want to be understood as claiming that it cost $18,000 to sell 100 machines. I don't profess to claim that it cost us any specific amount, not having kept any expense a/c during that period. I simply know that my time has been generally occupied and employed in the sale; that my time and expenses have been charged to our firm.

X Q. 101. Did you not intend by that statement that this business in general had been a source of profit only of 15 or 20 or 25 %; that you could not give any items of expense connected with the sales, but in making this statement regarding the employment of an agent at $2,500 intend to convey the idea that said statement and representation would account and cover up the probable doubt left undiscovered?

(If the complainant in the above question means to ask whether the estimated salary of a person traveling and introducing the machine referred to was deducted from the profits of the manufacturer, such
335 question is objected to by the defendants because the witness has already said it was not.)

X Q. 102. Have you not stated that your profits were small in this business, comparatively, in consequence of the cost of manufacture, together with the cost of selling, and hav'n't you in $2,500 statement referred to attempted to explain the cost of selling the 400 machines, or the amount reported by you, on the ground that your company had kept no expense a/c, and that you would make it as clear as possible that your 7 & 8 years' labor in selling and introducing the same by making this comparison, that if you had hired the labor it would have cost you nearly 18,000 dollars? If not, please explain it.

A. In making the answer that I did I had no particular reference to the 400 machines stated in our a/c. I spoke in general terms of the expense of carrying on the business.

The further taking of testimony adjourned till 2 p. m.

Master.

Examination resumed pursuant to adjournment.

Master.

336 X Q. 103. In your statement furnished of the No. of machines sold, referring to two machines sold H. Harvey & Sons, Cleveland O., Sept. 28th, 1865, do. do. 1 more Oct. 15, 1866, all No. 3s, what expense did you incur in selling those machines?

A. I don't know any thing about them.

X Q. 104. Do you know what Mr. Parks has reported as the cost of No. 3 machines?

A. I don't know definitely. I have seen it stated somewhere at 40 or 50 dollars.

X Q. 105. If they cost 40 or 50 dollars and you sold them for $150 apiece, do you suppose there was more that 25% made in that transaction?

A. I suppose if it is stated that they cost 40 or 50 dollars, that it means cost of manufacturing. There is no question but that there are isolated machines on which we make more than 25% on, and there are a great many others that we lose money on. Sometimes the expenses attending the putting up of machines and the attention that they require, not running just right, requiring us to visit them, uses up all the profits we should have on them.

337 X Q. 106. Please state one such case and where it was, referring now to any of the machines reported by you.

A. Well, I think I can't state definitely about them. Can't specify any one particularly. Such cases are not infrequent.

X Q. 107. There are quite a number of No. 3 machines—5 or 6—charged G. B. Turner in this a/c. The expenses in disposing of those machines were borne by you individually, and out of the prices sold for in excess of the prices charged you for them at the shops, were they not?

A. I took those machines at the shop price less 40 %, and sold them, and they didn't net me enough to pay my expenses, and I lost my time. This was an individual enterprise.

(Complainant objects to the answer as irresponsive.)

X Q. 108. I mean, if you dont understand me, instead of shop prices the prices reported in your statement as having been charged you for them. Were you not to sell those at your own expense?

A. The prices as charged there are correct, and I was to sell them at my own expense.

338 X Q. 109. You have put a letter written by Booth to Hatfield in this case as an "Ex;" please state how you came in possession of it, if you know.

A. Mr. Hatfield formerly occupied the shop we now do, and left a large amount of old books, papers, &c., there. Mr. Vaughn had curiosity once to examine the stuff one day and found the letter.

X Q. 110. Then you have removed your factory to the place formerly occupied by L. Hatfield, have you?

(Question objected to as immaterial.)

A. Yes, sir.

X Q. 111. Will you state what you know and all you know about the first history or knowledge of Booth's connection with the first zigzag separator patented by him?

A. I know nothing about Mr. Booth's getting up his first zigzag separator.

X Q. 112. Did you not know, by common report, from the citizens of Cuyahoga Falls that Booth had returned from N. Y. in the spring of 1859, and that he was engaged in constructing a separator?

A. I understood that he was engaged in the construction of
339 some kind of a machine, but I knew nothing at all of its character, neither did it in any way excite my curiosity.

X Q. 113. Do 'u know of any person whose curiosity was excited upon the subject so much as to ask you if you would not get in and see it?

A. I believe Mr. Vaughn once asked me a question of that character.

X Q. 114. Did you not at one time attempt to break down the construction of Booth's claims to zigzag sieves by the introduction of a machine known as the Akron machine, Exhibit Akron herein, in a suit commenced in Chicago by Booth against Baxter & Co. for selling the Vaughn separator, and didn't you offer it as a prior invention to that of Booth's, and didn't you advocate that it contained so much of the principle involved in Booth's original invention as to break down all of Booth's claim to zigzag sieves?

A. Mr. Booth is correct in supposing that I claimed and do now claim that the machine marked Ex. Akron contains all the elements of his patented zigzag except the lateral shake motion, and I refer to Exhibit O, R. J. W., wherein Mr. Booth says "to remove all further
340 argument as to the Akron machine containing any prior similarity, I confined myself in the last reissue (1864) to the combination of a series of zigzag sieves with a lateral shake motion, the same of course as was found in my model, and which was not found in the Akron machine, but is used with zigzag sieves in the Vaughn machine as well as mine."

(Complainant objects to all of the foregoing answer after the words "is correct.")

X Q. 115. Now, Mr. Turner, will you please answer my question without bringing in irresponsive matter.

A. Upon rehearing the question I answer it in the affirmative, and would say further, in explanation, I had understood that Mr. Booth had commenced a suit in Chicago against T. W. Baxter & Co., and about that time we had discovered this Akron machine. We had a model made of it, and I propose to show that model to Mr. Booth's attorneys, Leamard & Goodwin. I understood that the effect of the exhibition of that model to the att'ys was the sole cause of the discontinuance of the suit by Mr. Booth.

(Complainant objects to all after the affirmation as argumenta-
341 tive and not responsive.)

X Q. 116. Do you know of any other suit brought by Booth against Baxter & Co. after the reissue in 1864?

A. I believe there was such a suit commenced in 1865.

X Q. 117. Did you make any objections or did Mr. Baxter or his att'y to your knowledge to the proceedings in that case; and, if so, what were they?

A. My impression is that we simply took a rule on Mr. Booth for costs, being a non-resident, and that he didn't furnish the requisite bail, and the suit was discontinued.

X Q. 118. In condemning Mr. Booth's first invention on the ground of impracticability or on any other ground, as well as in the statement made by you that the second construction of Booth's machine by him being a very inferior machine to that of Vaughn's, why have you not examined any of the millers who have used them?

A. I never did condemn Mr. Booth's first machine as an impracticable machine. I have spoken of it frequently as inferior to Vaughn's,
342 and have always claimed to millers that the 2nd machine of Booth's was an infringement upon the Vaughn and was a machine not sustained by his patent. I have always that the machine, as he constructed it in the first instance, could be made to do very good work, and never having any controversy with it in any shape, I never had any occasion to examine any of the millers in regard to its operation. I examined the machine 2nd construction in the mill of O. B.

Ford. He condemned the machine, saying that the cockle riddle was worthless, that there was no provision made for cleaning it off. I understood from him that he made a door above the cockle riddle so that he could clean it off. I never supposed that it would be pertinent to this case to that the testimony of millers in *in* regard to the machine of Booth's second construction.

(Complainant objects to answer as to what Ford said.)

X Q. 120. Did you not, in New York, a few days ago, examine the Baxter in reference to Booth's first invention, and didn't he there, with the letters patent in his hand and the drawings before him, attempt to dissect the machine, describing it in such a manner as to make it,
343 in his opinion, an impracticable machine?

(Objected to, because Baxter's testimony is in the case.)

A. Mr. Baxter's testimony is on file in the case. I refer to that.

X Q. 121. Have you repeatedly examined Mr. Vaughn's reissues upon his original zigzag machines as the subject of controversy in this case?

(Objected to by defendant, the machine manufactured by the defendant being the machine in controversy.)

A. I have.

X Q. 122. Have you not understood that it is distinctly set forth in said patents that machines constructed like Booth's original patent, having long fans and long sieves, were comparatively worthless, and that his sole object and aim was to make such machines valuable by his improvement?

A. For what is specifically set forth in Vaughn's patents and the object and aim of the patentee, I would refer to the patents themselves on file in this case.

X Q. 123. In your explanations you have stated, as I understand, that a machine constructed like the Moline, which has the zig construction and the end shake, and which you declare is the most perfect
344 separator of oats from wheat in this country, why didn't you use or adopt that plan instead of the zigzag and lateral snape motion?

A. Because I think the zig form of riddles and end shake is the most perfect and natural for an oat separator; it can't well be constructed without a long fan and a long shake-shaft, which were objectionable as we made them. I will state further that the riddles of any separator take out the large and heavy oats, while the blast is expected to take out the small light oats, which cannot be done properly by the long fan, for the reason that it cannot be well supplied with air.

X Q. 124. The Moline machine has a short fan, has it not?

A. It has a short large suction fan on the top of the machine.

X Q. 125. Was there anything to hinder your adopting the same device?

A. We have for several years been making a machine of similar construction.

X Q. 126. Did you, prior to the commencement of this suit, in 1871?

A. My impression now is that we began to make these machines in 1869?

345 X Q. 127. Is that the machine referred to by Mr. Vaughn, called the "dustless"?

A. I suppose it is.

X Q. 128. In that construction of the question you avoid your idea of necessity of the use of long fans, do you not?

A. It don't make any difference in a dustless separator—the size of the fans.

X Q. 129. Do you use the zig or the zigzag plan in the dustless separator manufactured by you?

A. Zig.

X Q. 130. You applied for a patent, did you not, in 1860 or 1861, for the zig arrangement; you and Vaughn, did you not?

A. Yes, sir.

X Q. 131. Did you obtain the patent? If not, why?

A. Yes, sir; I did.

X Q. 132. Was the application for that patent not rejected on the ground that it was fully anticipated in the original patent of Booth for zigzag separator?

A. I applied for a patent in 1861, and at that time claimed what are called the zig-riddles and directing-boards. The office at that
346 time refused the patent on those cla'ms, and I had to amend; at the time I did not know what they claimed anticipated me. Subsequently, in 1869 or 1870, I was in Washington, and told Mr. Stoughton, my ag't, that I would make an application of that patent. Mr. Stoughton and I examined the office and the references which anticipated my claim. I explained the drawings, &c., to him, and among them I think was Booth's. After that explanation he said I was entitled to a patent, the application was filed, and after a struggle of 6 months they granted me a full and unconditional patent for what is termed the zig-riddle and directing-boards.

X Q. 133. Was not the first application rejected squarely and wholly upon the patent (original) of Booth?

A. I suppose the facts to exist just as I have stated in the foregoing answer.

Further taking of testimony adjourned till 7 p. m., 28th.

Master.

Night session.

347 X Q. 134. You state that you have what you consider a good and sufficient patent under a reissue granted you for the zig patent in 1870, or thereabouts, whereby you claim the same arrangement that you have described in the Moline machine.

A. I suppose it to be so; all the Moline machines that I have seen have that arrangement.

X Q. 135. Has not the machine called the Richmond, built at Lockport, N. Y., the same arrangement as your zig?

A. I suppose it is.

X Q. 136. And the machine manufactured and known as the Ferguson, of Chicago?

A. I suppose they have the same or similar arrangements.

X Q. 137. Has not the machine called the Palmer and Plommden, of Chicago, the same arrangement?

A. I believe it has, though I haven't seen one for 10 years.

X Q. 138. Have you not sent notices to the Moline, to the Richmond, and some of these others since the reissue, claiming that they were infringements of your zig-machine, and that you would hold them
348 responsible, and that they had better settle with you for the use of it?

A. Yes, sir; we issued a circular claiming in general terms that all of these machines were infringements, and I have told several parties that

we so considered it. Don't know that I ever threatened to sue any one.

X Q. 139. You cite, do you not, in those circulars a great many decisions setting forth the penalties for infringing?

A. I haven't one of the circulars with me, but I suppose it is so.

X Q. 140. Why have you not taken steps to maintain that patent, and to stop these parties from using it?

(Objected to as immaterial.)

A. I would say that I don't think the game is worth the ammunition, as I have a very poor opinion of the whole business.

X Q. 141. The zig patent is a series of sieves inclined in one direction with a directing board underneath the sieve inclining in a reverse direction, which incline board returns the grain into the upper
349 edge of each succeeding sieve, following the return board and one return board under every board?

A. Yes; that is generally correct, I believe.

X Q. 142. And you claim that patent under any shake-board, do you not?

A. Yes, sir; we use it sometimes under one kind and sometimes under another, just to suit the locality.

X Q. 143. In your opinion would it be an avoidance of your patent of zig-machine to place a sieve over such inclined board so that the grain would pass through that sieve before it struck the board?

(Objected to as irrelevant, &c.)

A. I think it would be an avoidance if the inclined board had the same direction as the riddle.

X Q. 144. You claim, then, that by inserting under the sieves a directing board having the same inclination with a little space between would avoid your patent, do you?

I do; 'twould make a zigzag.

X Q. 148. Then, in your idea of patents, by adding to an invention
350 intermediate devices, which makes the machine of quarter more capacity and in no way interrupting the original arrangement, is a means by which a patent or the zig patent can be avoided?

A. I will answer that question by saying that it is entirely unintelligible to me. I don't understand its meaning.

X Q. 146. Take the Vaughn machine model before you and look at one side, and tell me does not the grain go through a series of sieves inclined in one direction, with a series of return boards inclined in the opposite direction, and no more or less. Can you see or discover and doesn't it, in fact, perform the same operation, excepting, of course, any additional operation that it may at the same time perform on the opposite side?

A. The Vaughn machine is a zigzag with a directing board under the first riddle with the same inclination as the riddle, and carries the grain into the second riddle, which has a directing board inclining in the same direction, but both being inclined in a direction reverse to the inclination of the first riddle and directing board, and so on through the series, exactly in the reverse operation of the zig.

351 (The answer is objected to as being wholly irresponsive.)

X Q. 147. The machine now is square before you, is it not?

A. It is.

X Q. 148. Can you see a sieve on the other side of that machine from where you sit?

A. I can't see a sieve.

X Q. 149. Then is not that as far as you can see in principal the zig

patent? Isn't there a sieve inclining in one direction, and directly under it a directing board inclining in an opposite direction?

A. So far as my eye shows me there is a sieve inclining in one direction, and under that sieve I know there is a directing board inclining in the same direction. I further see under the same sieve a directing board inclining in an opposite direction, and I know that over that directing board there is a sieve inclining in the same direction.

(Answer objected to as far as answer relates to what witness says he knows.)

352 X Q. 150. Will you stand square in front of the Vaughn machine and tell me is not the first thing you see a directing board inclining down and from you, and right under that do you not see a sieve inclining towards you, and directly under that do you not see a directing board inclining from you in the same manner as the one above described, and then directly under that do you not see another sieve inclining towards you, and do you see anything else connected with the sieve arrangement?

A. Well, sir, the first thing that I see is the directing board inclining from me. I can't see through that directing board to see the sieve which is directly above it and which inclines in the same direction. I next see the riddle which inclines towards me, but I can see the directing board under it having the same direction, and so on through the series of sieves and directing boards.

(Answer objected to as to that part which is not responsive.)

X Q. 151. You refuse then, do you, to answer the question as to what you can see unless you can also tell what you can't see?

353 A. I say I have answered the question fully as to what I saw, and I mentioned other things which I knew to exist.

X Q. 152. And from what you do see, and as far as you can see, it is a zig, is it not?

A. From the position in which I view it it has the appearance of a zig.

X Q. 153. Turn the machine square around and tell me if in that position you can see anything but a zig there.

A. I see a zig there, but putting them both together I see a zig-zag.

The further taking of testimony adjourned till 9 a. m., 30th.

Master.

Taking of testimony pursuant to adjournment.

Master.

X Q. 154. How many sieves and boards can be used on the zig principle and not infringe your zig patent, in your estimation?

(Question objected to as irrelevant.)

A. I suppose that two riddles and directing boards, or one board, would be termed a zig machine. My opinion has always been

354 that two riddles and one board was within the scope of that patent.

X Q. 155. Don't you claim a series of directing boards, and doesn't your patent depend upon the series of boards?

A. I do not recollect the expression of the claims. My opinion has always been that if I had two riddles operating with one directing board, that would come within the scope of my patent.

X Q. 156. You are quite satisfied, then, that two sieves are necessary, are you?

A. Yes, sir, I am.

X Q. 157. Then you would count two sieves a series of sieves, would you?

A. Yes, sir.

X Q. 158. You count one board a series of boards, do you?

A. Well, no, sir; not exactly.

Redirect examination by Mr. KERR:

R. Q. 1. State whether in the construction of the Vaughn machine, when made with the side shake, there is any saving over the same machine made with devices for securing an end shake.

355 A. In the construction of the Vaughn machine the shaking of the riddle and the operation of the fan is done in the most simple , using the least possible number of shafts and pullies. And I think there would be a saving in that construction probably from a dollar to a dollar and a half over the way adopted by Mr. Booth's patented machine, or, I might say, by any end shake.

R. Q. 2. Have you deducted from your profits, as estimated by you, any losses from bad debts arising from the sale of the Vaughn separator?

A. No, sir.

R. Q 3. Do you know of any such debts at present?

(Question objected to, unless it applies to machines reported as sold since Nov. 29, 1864.)

A. I answer that I am not prepared to state the time. We once gave Mr. Baxter credit for between $11 & 1,200 for bad debts which he had made in the sale of our machine.

R. Q. 4. Are there any other instances in which you know the time?

A. Mr. Baxter made an assignment, I think, about 18 months ago. He was owing us at that time, I think, about $400, of which we never expect to receive anything. He had given us an order previous

356 to that on a party in Toledo, for, I think, about $150. But we have never yet been able to recover anything on that.

(Answer objected to, as it was since their report, which was made covering machines made up to 1871, since which time hey claim they have made none.)

G. B. TURNER.

357 JONATHAN L. BOOTH called on the part of defendants.

Q. 1. I see in your statement, in answer to ques. 9, of your former examination in this case, an item as follows: "Expenses other than costs of suit not less than 450 or $500." State specifically what makes up the amount.

A. I presume it is made up of my estimated traveling expenses in going to and from Cleveland on business connected with this suit. I don't know but that ac. included one trip to Pittsburgh with Mr. Perkins to take testimony in this cause. But that ac. was given, however, as quite small enough, according to my best judgment, intending to cover my money disbursements, myself and attorneys, going to and from Rochester and Cleveland, a great number of times myself, once for myself and att'y from Rochester to Pittsburgh, where testimony was taken in this case; at the same time I had other business at Pittsburgh, and did not estimate but half of the charges as applicable to this case, but Mr. Bakewell stated that he wished to introduce some evidence in the case also, and did so, and gave me to understand that it was an accommodation to him; and again my expenses and att'y, first myself from Roches

358 ter to Akron, O., with my att'y from Cleveland to Akron, our hotel bills there two or three days, and our expenses in return to our respective homes.

Q. 2. Please look at the paper now shown you and state whether it is a copy of schedule A, J. L. Booth's & Co.'s receipts and expenses, put in your case for application for extension.

Defendants offer in evidence the schedule referred to, & marked it Defendants' Schedule Receipts, Ex. , Master.

(Question is objected & Ex., also, as inadmissable, not being certified to, if any intention is had of showing this statement as expenses in the present cases.)

A. I presume it is, have no reason to doubt it.

J. L. BOOTH.

359 *A detached portion of Booth's testimony before master.*

1. Was the Vaughn machine you refer to as being seen in 1859 like the machine represented by the Vaughn patent and model in the Patent Office?

Ans. It was.

2. Have the Vaughn machines, or those manufactured by the defendants since then, and represented in Exhibit C, been like the machine you then saw in 1859? If different, in what respect different?

Ans. They are not like it; they are different. The one I saw had the sides of the sieves all boxed in, there being only one end exposed, and the sieves could not be cleaned except by a brush with a long handle, a plan that is entirely impracticable; this is now seen in the model at the Patent Office, as well as shown in Vaughn's original patent, now in the case, although one side has been stripped off, or left off, by the draughtsman, in one view of it, in order to show the sieve arrangement. The model shows that these sides are to be fixtures, and necessary to the prevention of the oats from falling outside the machine. In the manu-

360 facture of the Vaughn machine and introduction, this boxing up was obviated, and the machine made and sold as represented by Exhibit C. I stated in my cross-examination that I have never made any machines like Vaughn's. What I meant was that I never made one like that, with the sieves boxed up, like the one I saw in 1859 in their shop, & as represented in Vaughn's patent. Those he and the defendants have since manufactured, or were manufacturing up to the commencement of this suit, are substantially like mine, and the first machine I saw was substantially like mine in everything except the boxing up.

361 JAMES A. VAUGHN, being first duly sworn, deposes as follows:

Examined by Mr. BOOTH:

Q. 1. Was your zigzag separator, as constructed and patented by you, an open-sided machine or a boxed-up one? What I mean is, was there any portion of the zigzag sieves exposed so they could be readily cleaned, or cleaned in any manner except at one end?

(Question objected to so far as what is patented, the patents themselves being the best evidence as to what is patented.)

A. We never made a machine except that the sides were open, so that they could be cleaned.

Q. 2. Did you ever make a model that way?

A. The model, I think, had zinc nailed up at the sides.

Q. 3. Where did you first see what you term long fan and *and* long sieves, as you describe in your patent Jan'y 8th, '61?

(Objected to as not properly rebutting, when you say, "I am also aware that a series of long zigzag screens and a long fan have been arranged in a frame to make a grain separator.")

362 A. The first idea I got of any such thing was from the drawing of J. S. Booth shown to Turner, Parks & Co. in my presence. This was in Sept., 1859.

Q. 4. Was that the last and only time you ever saw such a machine zigzag and long?

A. No, sir; I have seen zigzag screens and long fan at Black Rock, N. Y.

Q. 5. When did you see it there?

A. I think in the fall of '60 or '61.

Q. 6. Did you see more than one?

A. I did think I saw 4.

Q. 7. Can you state, with any more certainty, whether this was in the fall of '60 or '61?

A. I can state positively that it was not in '59; whether in '60 or '61, I am unable to say.

Q. 8. Was it before or after the application for a reissue?

A. Cannot state.

Q. 9. Did you go from Cuyahoga Falls, O., to Black Rock, N. Y., with a view of seeing this machine?

363 A. No, sir.

Q. 10. Did you make it any part of your business?

A. No, sir; I saw the machine in a mill, and did not know it was there or expect to see it until then.

Q 11. Have you any objection to state what other business you had that called you to Black Rock?

A. I have not, but it was not in connection with the separator business; it was buiness of a private nature. I will state I don't think it of any moment.

Q. 12. You have stated before, have you not, that you did not know that Mr. Booth was constructing a separator in the village of Cuyahoga Falls previous to Sept., 1859, or at the time in September that Mr. Booth first called there; if so, are you still of that opinion?

A. Yes, sir; I think my former answers were correct.

Q. 13. Do you know of any person that did know; and, if so, who?

A. No, sir; I couldn't name any individual that was posted

364 about your business.

Q. 14. Did you ever see Booth's long fan & long sieve machine in Rochester, N. Y.?

A. No, sir.

Q. 15. In your first patent, April 24th, 1860, you say, "I have shown 6 sets of zigzag sieves and boards underneath them;" in your original examination you state, on page 19 of defendants' pamphlets, that you believe the model had seven riddles; I have not consulted the papers, but believe there "are seven for screening wheat, and one cockle riddle;" do you now think the patent correct or your statement of screen riddles?

(Objected to as improper and not rebutting.)

A. I havn't the slightest objections to answering the question. I think I was mistaken. I did not state positively at the time. I think the papers are correct.

Q. 16. In your reissue June 11, '61, you say, "I am aware, too, that a series of zigzag screens and a long fan have been used together

365 as a grain separator. This arrangement is very objectionable, first, because the riddles are difficult of access, liable to become

clogged, and must be often cleaned to be at all efficient." How is that difficulty avoided in your patent as represented by your model in Washington?

(Objected to as the model and the Vaughn patent are not the subjects of the controversy.)

A. That may not be clearly shown there. I think that is all I can say as to the model and patent.

Q. 17. You have stated, have you not, that the sides were closed?

A. I think they are.

Q. 18. Then, if they are closed, how do you get at them?

(Objection repeated, and the complainant's attention is called to the fact that the machine as manufactured and not as patented by the defendant is the matter in controversy here.)

A. Well, as the model is shown there I don't see any way to clean them except at the ends; we never made a machine so, though.

366 Q. 19. Further on in the reissue of June 11, '61, after speaking of the objection to the long fan, you say, "these imperfactions make such a grain separator of comparatively little or no practical value, and my object and aim is and has been to overcome these objectionable features, which I believe I have done, as I will hereafter explain." Was this so when you patented your machine, to your knowledge?

(Objection continued.)

A. Yes, sir; that is, I am quite certain that this objection spoken of has not particular reference to a long zigzag screen and fan.

Q. 20. Where did you see such a machine with these objectionable features prior to your application for the patent on your first zigzag?

(Objection continued.)

A. In the Cascade Mills, at Akron. I don't state that that was a zigzag, but it was a long screen and a long fan.

Q. 21. Is that the machine referred to called the Akron Exhibit?

A. No, sir; it was not.

Q. 22. Can you tell when you first saw the machine in the Cas-

367 cade Mills at Akron?

A. I can't state positively. I think in 1858, perhaps.

Q. 23. Had that machine long zigzag sieves and long fans?

A. I stated before that it had not zigzag sieves; it had long fans and long sieves.

Q. 24. Then you don't wish to say that you ever saw a series of zigzag screens and directing boards prior to your invention, do you?

A. No. sir; I do not.

Q. 25. Did you make and complete any Vaughn zigzag separators in 1859, excepting the one you have referred to as having been completed and in your shop about the time Mr. Booth called there in September, '59?

A. Well, from recollection, I should say not.

Q. 26. Can you state how soon after Jan'y 1st, 1860, you did take up their manufacture?

A. I cannot state that.

Q. 27. You did, didn't you, within a short time thereafter?

368 A. Yes, I think it was not a great while; within a few months.

Q. 28. You made those with open sides, did you not?

J. A. VAUGHN.

Further examination adjourned till 2 p. m.

Master.

Examination resumed pursuant to adjournment.

Master.

J. L. BOOTH appears in rebuttal, and states as follows in reference to the first machine patented by him, which is shown by Exhibit B, now before him.

That so far as long zigzag sieves are shown, that they do represent the machine actually made by Booth as first constructed and set up in the Crescent Mills in Rochester, N. Y., before referred to. The fan and fan spout also shown in the model represent the same in about due proportion, so far as its length has any relation to the length of the sieve. That the shake-motion attachment, with a crank and balance-wheel, is also represented as was used in the first large machine that was made and set up in said mills, and that it is, in its general features, identical to the letters patent describing the same, and to
369 the large machine made; but is lacking in one feature that was in the machine made, as well as in the model and patent, and that is in the guide-pins at the ends, which held the series of sieves in such a manner as to prevent any other shake-motion being given them except a perfect lateral and horizontal motion at right angles to the direction of the grain through the machine—that every sieve return board in it and cockle-sieve all traversing in a perfect line and plane, conditioned only by their inclination, and that the shake was a perfect traversing one, without any injurious effect upon the action or separation of the grain; in other words, it traversed rapidly under, allowing the grain to spread itself evenly upon the sieves, creating no unnecessary jar or effect; and further, that the sieves of that machine were six feet in length, the fan was four feet in length, the diameter I cannot give; but believing that the model before me, being constructed as a duplicate of a model that was built at an early day to perfectly represent my invention, and made to a scale, it must be correct as to the fan diameter, as well as other relations.

370 This machine, as first put up in the Crescent Mills and manufactured at Cuyahoga Falls, is what I term a very large machine, built for a special purpose in that respect; but not supposing that I was confined in my patent to long sieves and long fans, I did afterwards make machines with sieves 3 feet in length and fans two feet in length, or very near that size, and even shorter, and those machines had half the cleaning capacity of the large machines, the large machine cleaning 100 bushels an hour, and cleaning it so perfectly that $\frac{99}{100}$ of the oats, in my opinion, were taken out of the wheat and run off in spouts to a garner made especially for the purpose of receiving the oats, the first garner for that purpose ever constructed in this country. That said machine was never intended as a chaffing-machine; that the wheat, when introduced to it, was previously prepared, so far as the chaff and the dust was concerned, and so directed by me, it having been passed through what is called a receiving-suction and blast-separator; therefore the oats that came from the zigzag sieves of the Booth machine were in perfect order, and
371 were sold in the markets of Rochester as oats at a cent or two a bushel in advance of oats sold elsewhere in the market.

For further effectual and satisfactory information connected with this machine, claimed to be an impracticable invention, as I understand it, I refer to the paper, to be read for what it is worth, said paper containing certificates first printed Nov. 30, 1859, followed by three more, one signed by Geo. J. Whitney, H. N. Peck, and Whitney and Hall, all being in Rochester to-day, with the exception of Mr. Hall.

(Said paper is put in evidence by complainant, and marked Ex. Certificates, Master.)

In long fans where the length exceeded nearly twice the diameter,

the draft of air proceeding up the trunk from such a fan may be stronger at the ends than in the center, provided it is not overcome by large eyes and wings, wide at the centers and more or less narrow at the ends, sufficient to overcome it: but in the fan as used by me in the machine used in the Crescent Mills, there was to some extent a stronger blast at the sides than in the center, but this being a desirable feature in this case it was not so overcome. The reason I give is that the
372 grain running down through a series of sieves six feet long, evenly spread and fed, when landing on to the top of the upper edge of the cockle sieve, which edge was also six feet, said cockle sieve was narrower at the entrance of the wheat to the fan-blast, so that it was four feet there on the lower edge; therefore, with that construction, there was a heavier feed of grain going into the fan trunk or spout at the sides and required a heavier draft of air. The separation of small seeds, shrunken grains, and all foreign substances lighter than wheat, was completely separated and elevated out of the top of and mouth of the vertical spout. The cockle sieve is open below, and was open below in the models as well as in that machine, and also accessable on the *the* top, can be rubbed readily by the hand on the under side—equal to any convenience to that purpose found in the Vaughn machine.

The spouts at each side and attached to the lower sieves of the series of zigzag sieves, for catching the oats as they drop from the sieves, were no more of an encumbrance that the weight of zinc from which they were made.

The rapid motion which was given them with the steep descent from their centers each way preventing any lodgment whatever of any oats therein; and there never was a time that there were two ounces
373 of oats to be found in them. This construction of a zigzag separator with a short trunk up at the side brought about no special inconvenience or hindrance to a ready cleaning of all the sieves by the hand from any side or end of the machine, excepting, perhaps, the upper surface of the cockle-sieve, which from that side never required any cleaning, being accessable from the under side. This combination of fan, trunk and sieves, so far as the relative positions are concerned, is, in my opinion, as practical and advantageous a plan for a large machine for a large mill, where you have plenty of height, as I know of.

This plan of construction permitting the use of more riddles within the same hight from the floor than one where the fan and spout run up at the end, the riddles in either being of the same length.

As an illustration of this I refer to plaintiff's Ex. C, which machine, as constructed by Turner, Parks & Co., having 5 sieves only in place of 6, as patented by him or shown in his patent, and a machine constructed on that plan, with five sieves 3 feet long, would be higher than one constructed on the plan of Booth's original patent with 6 sieves, and that is owing mainly to the fact that the fan of Vaughn being at
374 the end, near the entrance of the wheat, if of the same diameter, would set the machine up; for the reason that the inclination of the cockle-sieve all takes place from near that end.

I further find by actual measurement that the fan in the Vaughn construction of machines of his ordinary length of sieves, represented in his No. 2 & 3, and represented by the model in Plaintiff's Ex. C, contains a fan whose length is one & $\frac{3}{5}$ that of its diameter, while that in Booth's, as used by him in the Crescent Mills and represented by his patent, is $1\frac{1}{3}$ times. I would further state in regard to the crank-motion used by Booth, that the motion, philosophically and in fact, as that of an eccentric, and produces precisely the same results.

The crank used by Booth has a balance-wheel attachment which, while running at a comparatively high speed—about 200 per minute—produces the most effectual and satisfactory motion, as applied by him to the separation of oats from wheat, that I have ever seen. That in consequence of this arrangement of balance-wheel and crank I was enabled to produce a motion that was lasting, even and strong, and especially applicable to the shaking of long sieves and in the construction of large machines for large mills. While this is so, I would
375 despair of using an eccentric for that purpose without a balance-wheel, and would not attempt it.

I will state further, in regard to the machine constructed by me for the Western market and for small mills, that, so far as the cockle-sieve was concerned, it was enclosed on the under side and not accessable, but first made them with hand-holes or doors in the side, so it could be readily cleaned by the hand from the upper side, and that I soon found that, by rapping the sieve in about its center and on the edge with a hammer once every few days, protecting the machine from being brusied by the block of wood, that all anticipated difficulties from having the cockle-sieve encased were overcome; that in the Western wheat containing oats, for which these machines were constructed to clean, there was very little cockle grown, it being mainly found in winter wheat. In support of this statement as to the cockle-sieves, I would put in circular marked Plaintiff's Ex. Circular.

(The introduction of this circular objected to as incompetent.)

In reference to hand and end shakes, as applied to zigzag separators, I will say that I believe an end-shake arrangement to a zigzag
376 sieve arrangement, constructed and suspended in a frame as I or Vaughn have constructed them, would be a very inferior and very ineffectual kind of a shake, amounting, in fact, to an abandonment of the end-shake and the use of lateral shake in its place, especially if thrown upon the market as a competing machine with a machine for the same purpose and construction, having the lateral shake motion as constructed & used by Booth.

In evidence of this, I will say that I know of no such shake-motion being applied to a series of zigzag sieves as constructed by myself or Vaughn, or any other person. Further, I would say that such motion could be used successfully with other modified arrangements.

As to comparative cost of construction of the Vaughn machines as reported by Turner, Park & Co., and the one manufactured by Booth, upon which he has estimated his cost, to wit, costing me to have constructed 40 or 45 dollars a piece, I would say that the Vaughn structure can be built for less money, at least 20%, for the reason that Booth's plan had longer sieves, with the fan set so far from the trunk that it took more material; the crank-shaft and balance-wheel also added
377 to its expense, thereby making a larger machine, but one which would not clean so fast, but much better; that is, the motion of the machine was not so fast, while it would clean as large an amount of grain, being a larger surface, and clean it better.

Complainant here offers in evidence various copies of defendant Vaughn's patents, &c., as follows:

Defendant's patent dated 24th April, 1860, N. 28026, marked Complainant's Ex., No. 28026.

Defendant's pat., June 11, 1861, No. 91, marked Complainant's Ex., No. 91.

Complainant's extension report, marked Complainant's Extension Ex.

Complainant's extension report, marked Complainant's Extension Ex., No. 2.

Defendant's patent, January 8th, 1861, No. 1120, marked Complainant's Ex., No. 1120.

(Defendant objects to the introduction of these exhibits as irrelevant, incompetent, and inadmissable as rebutting evidence.)

Master.

378 Cross examination by Mr. KERR:

X Q. 1. You have been sued by the defendants in this case for the infringement of Vaughn's reissued patent No. 90, dated June 11, 1861, have you not?

A. I suppose so. The files in this court will show that.

The testimony before the master in the matter of hearing damages is here closed by the parties.

April 30th, 1875.

Master.

379 The U. S. Patent Office to all to whom these presents shall com greeting:

This is to certify that the annexed is a true copy from the records of this office of the reissued letters patent granted Jonathan L. Booth, dated Nov. 29th, 1864, No. 1826, for "Imp't in grain separators."

In testimony whereof, I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twenty-third day of January, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety-fifth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

Reissue No. 1826.

The United States of America to all to whom these letters patent shall come:

Whereas Jonathan L. Booth, of Rochester, New York, has alleged that he has invented a new and useful improvement in grain separators (for which letters patent were issued to him, dated September 20, 1859, the same surrendered, and new letters issued to him September 25, 1860, which last letters having been surrendered by him, the same have been cancelled, and new letters ordered to issue to him on an amended specification), which he states has not been known or used before his application, has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to
380 the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are, therefore, to grant, according to law, to the said Jonathan L. Booth, his heirs, administrators, or assigns, for the term of

fourteen years from the twentieth day of September, one thousand eight hundred and fifty-nine, the full and exclusive right and liberty of making, constructing, using, and vending to others to others to be used, the said improvement, a description whereof is given in the words of the said Jonathan L. Booth in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-ninth day of November, in the year of our Lord, one thousand eight hundred and sixty-four, and of the Independence of the United States of America the eighty-ninth.

J. P. USHER,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] D. P. HALLOWAY,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

381 Be it known that I, Jonathan L. Booth, formerly of Cuyahoga Falls, Ohio, but now of Rochester, in the county of Monroe and State of New York, did obtain letters patent of the United States Sept. 20, 1869, for improvements in grain separators, which letters patent were reissued Sept. 25, 1860; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings making part of this specification.

Fig. 1 is a vertical longitudinal section of my invention in the plane of line *x x*, fig. 2.

Fig. 2 is a vertical transverse section in the plane of line *y y*, fig. 1.

Fig. 3 is a diagram showing the manner of shaking the screens.

Like letters of reference indicate corresponding parts in all the figures.

This invention consists in the employment or use of zigzag screens and boxes, or passages, having a proper lateral shake motion communicated to them, and so arranged that the grain may pass consecutively over and through them, and be subjected to a thorough screening operation; also, in using in connection with the zigzag screens and boxes aforesaid, a revolving fan and spout, so arranged that the grain will be subjected to an efficient blast for the separation of all light impurities therefrom.

382 In the accompanying drawings, A represents a suitable rectangular frame in which a series of inclined screens, B, are secured by elastic pendants C, or equivalent.

The screens B may be formed of perforated zinc or other sheet metal, and placed alternately in reversed inclined positions, as shown clearly in fig. 2; each screen B is placed on the top of what may be termed a shallow box, C, which forms a passage for the grain, the boxes extending the whole lengths of the screens and receiving what passes through them, and discharging the same on the elevated ends of the succeeding screens, immediately below them, openings, *a*, being made at the lower part of each box, C, to allow the escape of the contents therefrom.

The upper, or most elevated part of each screen, B, is provided with a smooth or unperforated surface, *b*, said surface *b* first receiving the grain, and, consequently, their position is immediately below their openings, *a*, that of the uppermost screen being immediately below the discharge orifice *c*, of the hopper D. The screens and boxes are secured in proper position by uprights, *d*, which are attached to each end of them, the elastic pendants C being secured to the lower ends of the uprights. The hopper D is of the usual form, about equal in length to the screens B, and is secured in the upper part of the frame A. To the lower parts of the uprights *d*, I usually secure inclined troughs, B, said troughs being so placed as to catch the droppings from the
383 screens, and discharge the same at the ends of the machine.

Within the frame A, at a suitable position, a fan-box, F, is placed, concontaining a fan, G; the fan G is of ordinary construction as well as the box F, and the latter communicates with an upright spout or passage, H, which receives at about the centre of its h'ight the contents of the lowest screen, B. I prefer to use the spout F in the rear of the screens as shown; but, if desirable, it may be used on the opposite side, or at either end, at right angles to its present position, with the same result.

At a suitable position there is placed a horizontal shaft, T, from which the fan G is driven by belts, *e*, one at each end. At one end of the shaft T there is also placed a pully, *f*, from which a small shaft, *g* is driven by a belt, g^1. The inner end of the shaft *g* has a level pinion, *h*, placed on it; said pinion gearing into a corresponding pinion, *i*, which has a crank, *j*, at one end, from which a lateral shake motion, or a motion at right angles to the passage of the grain, is given the screens and boxes by a connecting rod, K.

The operation is as follows: The grain to be separated and cleansed from impurities passes into the hopper D, and through the openings *c*, on the uppermost screen B. The grain first strikes the smooth or unperforated portion, *b*, of said screen, and any oats that may be mixed with the grain are turned flatwise, and will pass off the depressed end of the screen. Some portion of oats, however, will pass through,
384 but they will be discharged by the box C on the next screen below, and will be subjected to a like operation, a majority of the oats being separated from the wheat during each passage over the several screens; and when the grain reaches the last or lowermost screen all the oats will be separated therefrom, the lowermost screen, B, being a cockle screen, the cockle being discharged from the lowermost box, C; the chess and other light impurities are discharged with the wheat from the cockle screen into the spout H, and the chess and light impurities are blown upward out from the spout H, the grain being discharged at *a**. The oats drop into the troughs E, and are discharged by them at each end of the machine.

By the employment of a series of zigzag screens, instead of a single set, the grain has the benefit of a long passage from ingress to exit, and therefore becomes free of oats, which is a matter of importance, especially in the separation of seed wheat. At each reverse passage over the screens the grain is presented in a different position, so that the thorough agitation it receives is such as to settle the wheat to the bottom so as to pass easily through the perforations, while the oats, being of a lighter weight, pass off over the top.

The advantage of giving a lateral shake to the screens, or one at right angles to the passage of the grain over their surfaces, is manifest.
385 In the first place, it is desirable to make the screens narrow in the

direction that the grain runs, inasmuch as the wheat passes through the perforations of the screens readily in passing over a short distance, leaving the oats on top, while, if the distance is great, a greater quantity of the oats are also liable to pass through; the narrow screens, therefore, are more advantageous than wide ones would be. But, if these narrow screens receive a longitudinal shake, or one in the direction of the passage of the grain, the grain will be thrown forward over the discharge end by the vibration without being effectively separated; and, second, the *the* lateral agitation distributes the grain evenly over the screens, and causes it to flow over the surface uniformly and regularly; whereas, if a longitudinal vibration is imparted, the grain is thrown forward and backward in jerks, so that a portion, at least, is thrown over, instead of passing through.

What I claim is the combination of the zigzag screens and boxes B, C, when the same have a lateral shake motion, or one at right angles to the passage of the grain in such a manner as to have the grain pass consecutively over and through them, and arranged relatively with each other to operate substantially as and for the purpose herein set forth.

I also claim the series of zigzag screens and boxes B, C, with
386 or without the troughs E, and having a lateral shake motion in connection with the fan G and spout H, substantially as herein set forth.

JONATHAN L. BOOTH.

Witnesses:
R. F. OSGOOD,
JOHN L. JUDSON.

(Here follows 2 diagrams, marked page 386.)

387 *Defendants' Exhibit No.* 1.

The U. S. Patent Office to all to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Samuel Canby, dated December 28th, 1852, No. 9500, for "Imp't in winnowing machines."

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be affixed this tenth day of January, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

The United States of America to all to whom these letters patent shall come:

Whereas, Samuel Canby, of Ellicott's Mills, Md., has alleged that he has invented a new and useful improvement in winnowing machines, which he states has not been known or used before his application; has made affirmation that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not to the best of his knowledge and belief been previously *been* known or used;
388 has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents,

signifying a desire of obtaining an exclusive property in said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant according to law to the said Samuel Canby, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-eighth day of December, one thousand eight hundred and fifty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of said Canby in the schedule hereunto annexed and is made part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington this twenty-eighth day of December, in the year of our Lord one thousand eight hundred and fifty-two, and of the Independence of the United States the seventy-seventh.

ALEX'R H. H. STUART,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[SEAL.] S. H. HODGES,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Samuel Canby, of Ellicott's Mills, in the county of Baltimore and State of Maryland, have invented new and useful
389 improvements in "Grain winnowers," and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings forming part of this specification in which figure 1 is a top view of the machine.

Figure 2 is a central longitudinal section.

Figure 3 is a vertical transverse section taken as denoted by the red line 22 of fig. 1.

Figure 4 is a top view of the air valve boxes showing the valves closed.

Where the same letters of reference occur on *on* the same figures, they indicate the same parts. The arrows show the direction of the current of air.

It is well known to those much occupied in the use of winnowing machines that a large amount of grain is yearly wasted by the accidental discharge along with the lighter refuse, whenever the blast is in excess of the ordinary rate in consequence of its irregularity in the impelling power or otherwise. This frequent serious and almost inevitable defect considering the nature of the motive power usually employed, is effectually remedied in the present improvements which have for their object the automatic moderation or adjustment of the blast of air to the shoe of the fanning mill, such adjustment being desirable as before stated, from the fact that with an increased agitation of the shoe the proportionate increase of blast from the fan is liable to blow away some of the grain along with the chaff and cheat, or in other words, is greater than
390 is necessary for the object for which it was intended. I also place under control of the operator, a device which enables him to vary the distribution of the blast to different portions of the apparatus according to the nature of the grain to be cleaned.

signifying a desire of obtaining an exclusive property in said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant according to law to the said Samuel Canby, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-eighth day of December, one thousand eight hundred and fifty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of said Canby in the schedule hereunto annexed and is made part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington this twenty-eighth day of December, in the year of our Lord one thousand eight hundred and fifty-two, and of the Independence of the United States the seventy-seventh.

ALEX'R H. H. STUART,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[SEAL.] S. H. HODGES,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Samuel Canby, of Ellicott's Mills, in the county of Baltimore and State of Maryland, have invented new and useful
389 improvements in "Grain winnowers," and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings forming part of this specification in which figure 1 is a top view of the machine.

Figure 2 is a central longitudinal section.

Figure 3 is a vertical transverse section taken as denoted by the red line 22 of fig. 1.

Figure 4 is a top view of the air valve boxes showing the valves closed.

Where the same letters of reference occur on *on* the same figures, they indicate the same parts. The arrows show the direction of the current of air.

It is well known to those much occupied in the use of winnowing machines that a large amount of grain is yearly wasted by the accidental discharge along with the lighter refuse, whenever the blast is in excess of the ordinary rate in consequence of its irregularity in the impelling power or otherwise. This frequent serious and almost inevitable defect considering the nature of the motive power usually employed, is effectually remedied in the present improvements which have for their object the automatic moderation or adjustment of the blast of air to the shoe of the fanning mill, such adjustment being desirable as before stated, from the fact that with an increased agitation of the shoe the proportionate increase of blast from the fan is liable to blow away some of the grain along with the chaff and cheat, or in other words, is greater than is necessary for the object for which it was intended. I also
390 place under control of the operator, a device which enables him to vary the distribution of the blast to different portions of the apparatus according to the nature of the grain to be cleaned.

To enable others to make and use my invention, I will proceed to fully describe it.

A is a frame work of wood. The hopper *b*, shaking shoe *c*, connecting board *d*, do not differ materialy from those ordinarily in use; *e* is an adjustible conducting shelf, just beneath the riddle *t*, by means of which the grain when light and dry is delivered from the riddle onto the screen near the rear end thereof, to prevent the grain being carried off by the light matter, and when the grain is damp or otherwise heavy so as to require a greater amount of winnowing action it is delivered on the screen *s* near the front end thereof. This is done by drawing the board *e* in or out. The shoe *c* is hung to the frame in the usual manner at front and rear, and vibrated through means of the bell crank A, and rod B, united to the crank end of the fan-shaft. The fan drum or case *f* is enclosed in a chest, *g*, somewhat larger than itself. This chest serves as a channel to conduct the air to the fan *f* from the valve boxes *h h*, mounted upon said chest and furnished with two butterfly valves *i i*. These valves are operated automatically by the following mechanism: Situated between the two boxes *h h*[1], is another somewhat larger, *j*, and like them open below to the chest *g*, occupying the entire horizon
391 tal area of this box with the exception of sufficient room around it for easy play up and down, is a piston, *k*, whose rod *l* has a rack down one side into which gears a pinion, *m*, whose shaft is identical with that of the butterfly valves *i i*. This shaft at one end extends with outside the box *h*, and bears on its extremity a pulley, *n*[1], on which is a cord and weight, *o*. This pulley is so arranged by slot in its side that it can set to any desired eccentricity, and secured thereto by nut and screw, *p*, so as to increase at pleasure the effective leverage of the weight.

In either end of the chest *g*, above the drum or fan case *f*, there is a opening, *g*[1], of which communicates through end chamber *g*[2] with the open ends of the fan case. The action of this mechanism is as follows. The action of the weight *o* on the eccentric pulley *n* is such as to hold the valves *i i* open, but when the fan shall have been revolved with a rapidity that shall cause a partial vacuum in the chest *g*[1] it is evident that the piston *k* will be forced down in the box *j*, a distance depending on the relative forces derived from the suction of the fan and pressure of the atmosphere upon the piston *k*, on the one hand and the resting efforts of the weight on the other, which it will be observed increase as the weight *if* lifted, so that should the speed of the fan decrease, the tendency of the weight is to cause the piston to ascend. Now, it is evident that the action of the piston will govern the action of the
392 butterfly valves *i i* in opening and closing the area of the valve-boxes *h h*, and consequently regulate the admission of the air to the chest *g*, and by proper arrangement of the eccentric pulley *n*, that is, rendering it more eccentric, the butterfly valves may easily be made more or less sensitive; for instance, they may be arranged to begin to close when the fan has attained and particular degree of velocity, or they may remain unaffected until a very rapid blast is generated, or the gradations in the actions of the valves may be variable according to the nature of the material to be operated upon and the experience of the operator.

From the fan-case *f*, two spouts, *g r*, proceed *q*, leading up between the screen *s* and riddle *t*, of the shoe, so as to direct the blast centrally between the two and the spout *r* taking a lower course and discharging below the shoe. The object of the spout *g* is to direct the blast from below the fan so as to carry off the main bulk of the light matter, chaff, and cheat from the descending grain at the front of the shoe. The grain

descending from the lower edge of the screen into the hopper *u*, passes into the spout *r*, and escapes through the aperture *v* in the floor, and in this, its descent through the escaping-blast of the spout *r*, the said blast carries up all the lighter particles and discharges them at the forward extremity of the spout. In order to adjust the relative force of blast in either spout there is a glass valve, *w*, hinged at the joining line of the spouts and fan-case, and operated by a rod, *x*, having at its up-
393 per end a thumb-screw, *y*, resting on the frame. The board *d* serves to conduct the screenings to a suitable receiver.

One end of the fan-shaft has a pinion, C, on it, into which matches a cog-wheel, D, mounted at the side of the chest *g* and furnished with a crank, E, whereby motion is given to the fan. It should have been stated that the valves *i i* are drawn to a horizontal position (as shown in Figure 4) when the velocity of the fan is too great, thereby creating a vacuum in the air-chest sufficient to cause the said valves *i i* to close by atmospheric pressure. If the valves *i i*, in a horizontal position, were of the same horizontal area as the boxes *k k*, it is evident the supply of air to the fan would be cut off, and the fan cease to do its duty, but in order to keep up a supply of air in proportion to the accelerated velocity of the fan the valves are made of less area than the boxes, so as to leave openings, L L, on either side of their axes (see Fig. 4) through which sufficient air is drawn to supply the fan until its velocity shall decrease, when, by the assistance of the eccentric pulley n^1 and weight, *o*, the valves will be caused again to open (as shown in Fig. 1) in the same proportion as the speed of the fan decreases, and thus afford a greater amount of air to the fan, which is required as its rotary motion decreases.

Having thus described my improvements in grain winnowers, what I claim as my invention, and desire to secure by letters patent is, the combination of the piston *k*, rack-rod *e*, pinion *m*, valves *i i*,
394 eccentric pulley *n*, in connection with a conducting chest, *g*, & blower, f^1, for the automatic gradation or government of the blast through the spouts *g r*, of a winnowing machine, arranged and operated in the manner and for the purposes set forth.

In testimony whereof I have hereunto subscribed my name before two subscribing witnesses.

SAM'L CANBY.

Witnesses:
WM. P. ELLIOTT.
LUND WASHINGTON.

(Here follows diagram marked page 394.)

395 *Defendants' Exhibit No. 2.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the specification and drawing in the matter of the letters patent granted Flickinger and Krim dated May 28th, 1842, No. 2649, for machine for cleaning grain.

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent-Office to be affixed this sixth day of January, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.]

SAM'L A. DUNCAN,
Acting Commissioner.

Daniel Flickinger and Sebastian Krim, Hanover, Pa., letters patent No. 2649, dated May 28, 1842.

Be it known that we, Daniel Flickinger and Sebastian Krim, of Hanover Borough, York County, and State of Pennsylvania, have invented a new and useful machine for cleaning grain of garlic, smut, cockle, cheat, & other foreign substances, which is described as follows, reference being had to the annexed drawings of the same making part of this specification:

Fig. 1 is a vertical longitudinal section of the machine.

Fig. 2, right side of the machine shewing the pulleys.

" 3, left side of ditto shewing the spouts.

" 4, end elevation.

Similar letters refer to corresponding parts.

396 The frame A, for containing and supporting the several parts of the machine, is made of suitable size, strength, and material for an ordinary machine, say about 5 feet long, 2 feet wide, and 5 feet high, being composed of four posts united transversely at bottom by two parallel cross timbers, and at top by two transverse caps, and longitudinally by the boards composing the sides, covered at top by a horizontal board in which the feeding hopper B is placed, the back end being closed by boards, part of which is secured firmly and part by hinges, to enable the operator to have access to the interior of the machine.

The front end being closed by two hinged doors, C D, the lower one, C, solid, and the upper one, D, of wire gauze, to allow a free passage of the wind from the fan and at the same time to prevent the escape of the chaff, and the bottom being closed by the inclined adjustable board hereafter described.

The vibrating shoe, containing the inclined seives F G H, for separat, ing the grain from the foreign substances, and the inclined conductors, boards or plate I J, placed below the seives G H, for conducting the cheat the garlic, the cockle, &c., to the side spouts *a b*, and for conducting the grain to the fan, and the hinged conductor K and trough *n*, for conducting the large garlic to one of the side spouts *c*, is composed of two boards, E, placed nearly as far apart as the width of the space 397 between the two side boards of the frame between which the shoe moves being connected together by cross bars, said shoe moving longitudinally over anti-friction rollers, *r*, arranged in inclined timbers, *t*, fastened to the inner side of the frame below the shoe and against other rollers, L, whose axes are inclined arranged in inclined mortises in the sides of the machine by means of a crank shaft, M, to which the shoe is connected by a connecting rod, N, at top, said crank shaft extending through the sides of the machine, having on its outer extremities a pulley, *o*, around which passes a belt band, P, leading to a pulley, Q, on the shaft of one of the pressing or crushing rollers R, the other roller R^2 being turned by the friction of roller R^1, a large pulley, S, being put on the axle of the first-mentioned roller, R^1, around which passes a band, T, leading to a small pulley, U, on the axle of the fan V, which is arranged below the rollers R^1 R^2, surrounded by a scroll case, W, except the opening for the tangential tube *f*, the driving pulley X being on the other end of the fan shaft at the opposite side of the machine.

The upper seive F, through the wheat, the small garlic, cockle, and cheat, and the smut are to pass and over which the large garlic is to be conducted to the upper inclined spout V, outside the frame, is composed of meshes of wire sufficiently large for the purpose intended and arranged in the shoe near the top thereof at an angle of about 10 or 15

degrees, with a horizontal plane extending about 2-thirds the
398 length of the shoe, the remaining third being occupied by the hinged conductor K, and transverse trough *u*, before mentioned, arranged at the same angle of inclination with said seives. The hinged conductor is a plate arranged at the same angle as said seive F, & hinged to the lower cross bar of the frame thereof turned up at the sides to prevent the escape of the grain, &c., and bent at the lower edge and formed into an inclined trough, *u*, which leads transversely into the mouth of the inclined spout *v*, for conveying away the small garlic, cockle, &c., said mouth being inside the frame at the rear of the shoe.

The second seive G, through which the cockle, small garlic, and cheat pass, and over which the wheat and garlic which are as large as the wheat, pass to the rollers R^1 R^2, is composed of wire meshes smaller than those of the upper seive F, and is arranged in the shoe below the seive F at an angle of about 15 or 20 degrees and is of the same length and breadth, a shute or conductor, Y, being arranged at the lower extremity of the seive G, and on the same line at the same inclination for conducting the wheat and garlic to the hopper Z, placed over the roller R^1 R^2. The conductor Y is a place secured to the bottom of the frame of seive G, and turned up at its sides forming flanges which are fastened to the sides of said frame & of sufficient width to extend nearly to the middle of the hopper Z over the rollers R^1 R^2. The hopper Z is composed of two inclined plates in the manner hereafter
399 described: An inclined conductor, I, is placed below the seive G, about an inch therefrom, for conducting the cockle, cheat, and small garlic to the lower edge of the same where the conductor is formed into a trough, *m*, having an inclination toward the side of the machine through which it extends and leads into a vertical side conducting pipe, *b*, on the outside of the machine, which conducts the said substance to a receiver, the aforesaid conductor I being nailed to the bottom of the frame of the seive G, leaving a space of about an inch between the said conductor and the screen.

The aforesaid trough *m* is made in a similar manner to trough *n*, before described. The rollers R^1 R^2, between which the wheat and garlic are passed together, without altering the size of the former or injuring it, and at the same time flattening and increasing the length and breadth of the latter for the purpose of preventing it passing through the meshes of the seive H whilst the wheat passes through them, are composed of wood covered with gum elastic or India rubber arranged transversely and parallel with their surfaces, touching or nearly touching as they revolve, the axle of one of the rollers turning in permanent boxes, and the axle of the other roller turning in sliding boxes made adjustible by horizontal screws *s* for setting the rollers nearer to or farther from each other to correspond with the size of the garlic and wheat to be passed between them, in the manner hereafter described.

400 Two transverse brushes *d d*, for brushing off the grain and garlic from the surfaces of the rollers, are arranged in the frame, against the surfaces of the rollers. These brushes are parallel and secured to the insides of the frame by flanges on the ends of the stock of the brushes screwed or bolted to the frame.

The hopper Z for conducting the grain and garlic to the rollers is composed of two inclined plates, inclining towards each other, fastened to the inside of the frame by having their edges turned up at right angles, forming flanges which are nailed to the inside of the frame. They are placed over the rollers a sufficient distance apart to allow the grain and garlic to pass freely to the rollers.

The lower seive H, through which the grain passes to the fan V, and over which screen the crushed garlic passes to a transverse inclined trough *p*, fastened to the lower end of the frame of the said screw H, which conducts it through the side of the frame into a short, vertical spout A for the collection of the garlic. The meshes of the screen H are the same as those of the upper screen F, and is of the same size, but inclines in a contrary direction at an angle of about 20 degrees. This trough is made like other troughs, & is nailed or otherwise secured to the bottom of the lower cross-bar of the frame of the screen H. It inclines to the side of the frame, & discharges the crushed garlic into the short spout *a*.

The inclined conductor J for conducting the grain which passes through said screen to the inclined adjustable board *e* is arranged below
401 the screen H and fastened to the frame of the screen, leaving a space of about an inch between them.

The adjustable inclined board *e* for conducting the cleaned grain to the spout *q*, at the bottom of the rear end of the machine, inclines back in a contrary direction to the conductor J at an angle of about 35 degrees, sliding on inclined ways *y* fastened to the inner sides of the frame, being raised on said ways for the purpose of elevating the upper edge of the board, in order more effectually to catch the grain, by means of a strap *g* fastened to the under side of the board and wound around a transverse axle, *k*, extending through the side of the frame having on one of its ends a ratchet wheel, *i*, into which a pall, *j*, gears, attached to the side of the frame, for holding the axle from turning back after the strap is wound upon it, or when the axle is turned in a contrary direction for again lowering the board being brought against a tooth of the wheel for holding it in its required position. The fan V for creating the blast for blowing away the mashed garlic and chaff is arranged in the rear of the machine between the two conducting boards J and C, and is surrounded by a scroll-case W open on the side toward the front, having a tangential spout, *f*, for directing the blast up the inclined board *e* and through the space at the lower end of the conducting board J and the upper part of the board *e*, through which space the grain descends, where it is separated from the chaff, &c., which is blown
402 against the vertical screen D at the front end of the machine, and by which it is arrested and conducted to the inclined trough *l* under the upper end of the inclined board *e*, over which end the remaining impurities are blown into said trough *l*, which conducts them to the short, vertical spout *a* on the side of the frame through which a branch tube, *u*, into which said trough *l* leads. The cleaned grain, being heavier than the garlic & chaff, descends through the blast of wind or current to the inclined board *e*, which conducts it to the discharging spout *q*. The machine may be operated by any convenient power.

The transverse trough *u* at the lower end of the hinged conductor K conducts the large garlic to the inclined spout *r* and by it into the short spout *a*, both arranged outside the machine.

The transverse trough *m* at the lower end of the conductor I leads into the vertical pipe *b* outside the machine, and is for the purpose of conducting the cockle, cheat, and small garlic to a separate receiver.

The trough *p* leads into the short spout *a* for conducting the garlic into said spout *a*.

The trough *l* leads into an inclined spout *w* which leads into the short spout *a* for conducting the chaff, garlic, dirt, &c.

The spout *q* receives the cleaned grain from the inclined board *e* & conducts it to a receiver outside the machine.

403 The adjustable screens *e* for moving the boxes of the axle of the roller R^2 toward or from the roller R^1, for altering the space between said rollers, are operated in the usual manner of such adjustable screens by having two metallic stationary frames, & in each a rectangular space in which the sliding box of the axle roller R^2 is made to move back and forth by said screws *s*.

What we claim as our invention and which we desire to secure by letters patent is:

1st. Separating garlic from wheat, by passing the grain & garlic between rollers covered with India rubber or other elastic substance that will mash the garlic & at the same time not injure the wheat but increase the size of the garlic & prevent it from passing through the meshes of the inclined screen through which the grain passes in the manner before described, or in any other mode substantially the same, &, in combination therewith, the arrangement of the several inclined screens, conducting boards, spouts, & tubes as herein set forth.

DANIEL FLICKINGER.
SEBASTIAN KRIM.

Witnesses:
WM. P. ELLIOT.
PETER FLICKINGER.

(Here follow 4 diagrams, marked page 403.)

404 *Defendants' Exhibit.*

The U. S. Patent Office to all to whom these patents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted B. T. Trimmer, dated July 27th, 1858, No. 21036, for "imp't in machines for cleaning grain."

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventeenth day of May, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety fifth.

[SEAL.]

SAM'L A. DUNCAN,
Acting Commissioner.

The United States of America to all to whom these letters patent shall come:

Whereas B. T. Trimmer, of Rochester, N. Y., has alleged that he has invented a new and useful improvement in machines for cleaning grain, which he states has not been known or used before his application, has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same has not to the best of his knowledge and belief been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said B. T.
405 Trimmer, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-seventh day of July, one thousand

eight hundred and fifty-eight, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said B. T. Trimmer, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-seventh day of July, in the year of our Lord one thousand eight hundred and fifty-eight, and of the Independence of the United States of America the eighty-third.

MOSES KELLEY,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] J. HOLT,
Commissioner of Patents.

The schedule referred to in these letters patent, and making part of the same.§

To all whom it may concern:

Be it known that I, Benjamin T. Trimmer, of the city of Rochester, in the county of Monroe, and State of New York, have made and invented certain new and useful improvements in machines for cleaning grain, of which the following is a full and accurate description, reference being had to the accompanying drawing, making part of this specification, and to the letters of reference marked thereon, same letters referring to like parts in all the figer's of said drawings.

Figure 1 is a side elevation of my improved machine.

406 Figure 2 is a longitudinal section of the same, and

Figure 3 shows the mode of communicating motion to the screen.

The nature of this invention will be best understood from a description of its construction and mode of operation.

A A is the frame of the machine, B is a fan blower driven by a band from the pully C, to which any convenient driving power may be applied. The blast engendered by fan B is driven through the three blast tubes D, E, and F, which unites in one discharge at the opening G. The grain is introduced through the spout H, falling through the first blast D into the lower spout I, whence it discharges upon the coarse screen of the shaker J. Blast D is so graduated as to carry off the lighter impurities, and the screw *a* is sufficiently coarse to allow the grain to pass through it but retains any coarse matter, such as chaff, oats, &c., which is carried down by its inclination into the inclined spout K, by its side, and by it is discharged outside of the machine. *b* is a fine screen which retains the grain but passes the chess and other small seeds which drop on the board *c*, the surface of which inclines in the same direction of the first screen *a*, and discharges also into the spout K, but the fine screen *b* inclines in an opposite direction, discharging the grain over the end of the board *c* upon another fine screen *d*, inclined in the same direction as *c*.

The fine matter which passes through this screen falls on the lower inclined board *l*, and is carried into the side spout L, whence it is discharged as from K. The wheat, as grain thus screened, falls into

407 the spout M, and thence falls through the second blast E into a

spout N, which conveys it into blast tube F. In this tube the direction of its fall carries it across the blast, and it is received by the concave surface of the tube, and descends to the point of final discharge at O, where it issues from the machine thoroughly cleansed of all impurities by the conjoint operation of the various screens and blasts.

A valve, *f*, is placed in the throat of the blast tube D, by which the force may be regulated and adapted to the weight of the grain with great precision, but still there will be some lighter grains, and some portion of the chess will be carried upward, and to arrest these and prevent their being blown out with the dust a cavity or deep expansion of the lower side of the tube is formed at P for the purpose of weakening the current so that these matters will drop of their own weight. At the bottom of this an opening is made for discharging the matter thus obtained into the tilting spout *g*. This spout, represented separately in a side view in fig. 4, turns upon a centre as axis consisting of two pins, it being broad enough to enclose the mouth P, and when inclined in one direction empties the grain, &c., upon the screens in the shaker J, to be acted upon again, or, if in the opposite direction, discharges it with the refuse outside of the machine.

A valve, *h*, at the junction of blast tubes E and F regulates the force of the air driven through them. In order to insure a perfect separation of all impurities, a strong blast through E is requisite, which will elevate some portions of the grain. By a sudden curve in the direction of the tube at *r*, a considerable portion of this is deflected from its course,
408 falling into the return spout Q. Here provision is made for passing it again over the screen, or rejecting it with the refuse *of* its quality is worthless. This consists in the sliding deflector R, which sits upon the top of the shaking box J, and is constructed to slide upon guides or ways attached to its side.

In the position represented in Fig. 2 it receives the grain returned by spout Q, and being inclined like the upper screen, deflects into side spout K. If moved back in the position indicated by dotted lines, the spout Q discharges directly upon the screens, and the imperfect grain is again submitted to the ordeal of screen and blast. The separation of various kinds of grain, as oats, rye, &c., from wheat, and the removal of chess, cockle and shrunk wheat, depends materially upon subjecting them to blasts of varied intensity, such as are obtained by the triple arrangement of tubes which I employ and by which I obtain a most perfect separation. The process is not complete until the grain has been passed through the blast tube F. Here the heaviest grain descends to the main outlet O, but as perfect separation of the lighter from the heavier grain is desirable, it is effected through this tube in connection with E. Its blast is regulated in part by valve *h*, but more fully by the movable di'phraghm *s*, which separates tube F from the enlarged space of the blast head in which the three terminate. It is hinged at *j*, and adjustable as required by the rod K; by moving it outward it forms, with the recess at the deflection of E, a largely expanded area which modifies the blast so as to allow the return of all but the lightest
409 grain that may be drawn up it. It also receives that portion which the force of the current in E has carried up so as to emerge at *r*. By so moving the di'phraghm as to contract tube F to a narrow space at *v*, the blast is strengthened, and the lighter grain from both E and F may be discharged above the di'phraghm and descend through the throat T, where it is discharged in a separate place. The dust and slight impurities are all discharged at G, the main outlet of the blast-head.

By turning valve *h* in the position shown in Fig. 2, nearly all the blast is driven up tube E, and with a force sufficient if required to carry a greater part of the grain up E, and this may be returned through the screen box or shaker again and again, or blown over at *b*, and returned at tube E, where it is subjected to a lighter blast. This concentrating the blast through E increases that of D, but this may be regulated as found necessary by the valve *f*. Increasing and diminishing the space between *l* and the di'phraghm S also exerts an influence on the blast of D, for as that space is contracted the blast D is weakened by the expansion of the head, and will drop its heavier particles through T. The arrangement of the several blast tubes, the movable di'phraghm, and the valves is designed to give the operator perfect control over his machine, enabling him to increase or modify the force of the blast while acting on the grain in its several passages through the blasts, thereby adapting it to the variations in the gravity of
410 the grain, as well as to the cleaning and separating of different kinds of grain.

The shaker or screen box J is operated with a ver'ical vibratory motion and horizontal sweeping motion at the same time. It is suspended by four coiled springs *m*, one placed at each corner. Directly above it two disks or wheels *u* are hung at the end of vertical shafts *o*. To the lower face of these disks a rod, *p*, is attached to pins which form cranks. The pins are placed at opposite relative positions to the shafts of the wheels, so that when rotated in opposite directions the ends of the rod *p* are made to revolve also in opposite directions, giving a compound circular or gyratory movement as represented by the dotted lines *x x* in Fig. 3, which is an inverted plain view of this arrangement.

Bevel gears or other equivalent arrangement are employed to drive these cranks in their opposite directions. The rod *p* is attached to the top of the screen box J, causing it to pass through the same evolutions. Fig. 3 shows the screen box as attached at *q*, and Fig. 1 represents the parts in elevation. To vary this sweeping motion the crank-pins are attached to dove-tailed slides, *v*, by which the crank may be made longer or shorter. To give the vibrating motion, a wedge-shaped cam, *s*, is attached to the face of each crank-wheel, so as to pass the rod *p* at each revolution. Play is given the rod on the two crank pins *t*, Fig. 3, and the springs *m*, hold it against the face of the wheels until it is raised by the point of the cams. As the cam passes the rod the springs throw it back to its former position. The cams are
411 so placed on the wheels that one end of the rod is passed by one before the opposite end is reached by the other, this increasing the vibration produced upon the screens. These cams are raised and lowered at the thick end by means of a set screw *u*, to give greater or less motion as required.

The effect of this compound gyratory and vibrating motion upon the grain in passing the screens is very thorough, the motions being a close imitation of the natural operation of the human hands in screening. By means of this the horizontal motion of the screening surface is raised so as to give the greatest range of motion to the edges or exterior parts, while the center is comparatively quiet. This tends to overcome the centrifugal tendancy of the grain whereby it is apt to clog the borders of the screens and reduce their superficial area.

On some grains the use of the cams *s* may be dispensed with, as they do not require such vigorous shaking.

What I claim as my invention, and desire to secure by letters-patent is—

Giving the screens an unequal reversible gyratory motion for the purpose of neutralizing the centrifugal force of the grain, and retaining it in the centre thereof in combination with the vertical vibratory motion by means of the double reverse acting cranks *u u*, cams *s*, and springs *m*, as their equivalents, arranged and operating substantially in the manner and for the purpose set forth. I also claim the com-
412 bination and arrangement of the blast generator B, triple blast tubes D, E, and F, and their valves *f*, *h*, and movable di'phrag*hm* *s*, with the screen box J, and return spouts P and Q, operating conjointly for separating, screening, and returning the grain, and for increasing, diminishing, and modifying the blasts for the various purposes required, substantially in the manner set forth.

I further claim the adjustable deflector R, in combination with the screen-box J, for returning the lighter grain through the screens, and resubjecting it to the blast, or discharging it as refuse, as described.

B. T. TRIMMER.

Witnesses:
S. J. ALLIS.
J. FRASER.
Ex'd.—H. H.

(Here follows diagram marked page 412.)

413 ROCHESTER, N. Y., *July 19th*, 1871.

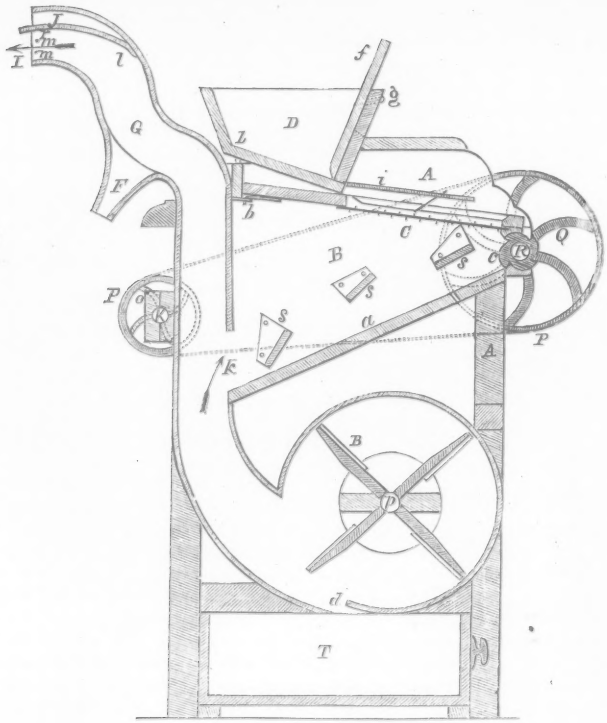
J. M. LOGAN, Esq.,
Springfield, Ill.

DEAR SIR: In placing the complaint before you for adjustment, I will now give you the facts concerning the history of the Vaughan machine as well as my own, that will throw any light upon this subject; and to that end, submit so much of it as you will find herein contained, all of which I can prove to be true by living witnesses.

On April 8th, 1851, I was a resident of Cuyahoga Falls, Summit County, Ohio, and soon after that date received letters patent of the above date for for an improvement in grain separators; this was the first patent ever obtained by any one in that place for grain separators, if not the first patent of any description received by any resident of that place up to that time.

This separator contained a fan and vertical blast spout, with one sieve only, and was a very successful machine, as many as one thousand having been manufactured and sold in the mills in this country; it cleaned the grain from all impurities, ran with little power, was cheap and durable, and may be recognized by the following view, which it will be seen contains a fan, a vertical blast spout, and one sieve.

EXHIBIT V.—R. J. W.



Grant B. Turner, of the present firm of Turner, Parks & Co., of Cuyahoga Falls, Ohio, at that time unemployed and for a long time out of business, was allowed to travel and sell this Booth's patent of 1851, visiting the States of Michigan, Wisconsin, &c., in the Western States, after which he traveled in Pennsylvania, Virginia, North and South Carolina, continuing in my employ, selling this separator on commission, for a period of several years, doing well for himself; and during this period of time doing very well for me. This separator was, as I said before, a successful machine in separating all impurities from wheat; but for spring wheat containing oats, it would not (neither was there a machine in existence that would) separate oats, except such small blasted kernels that were easily raised and blown out by the vertical blast spout which operated upon the specific gravity principal; and in this it was to a great degree successful, at least an improvement over all horizontal blasts.

The winter wheat countries being largely supplied with this machine, and others using the vertical current process, a principal not patented, but used prior to my invention in the form of a suction, or a vertical air

current formed by a vacuum fan, my separator, being the first containing the vertical blast plan.

This Turner being again out of business, asked of me the privilege of using my invention in combination with a new device to be called a smut machine which he thought he could construct by raising the sieve and length'ning the vertical spout so as to place a smutter or scourer between the sieve and the ingress of the grain to the wind-spout. I gave him verbal assent to do so, wishing to show him some regard for past good conduct and faithful attention to my interest, in addition to his commission already received as a satisfactory reward.

414 This G. B. Turner, soon after leaving my employ formed an association called Turner, Parks & Co. The company embracing one James A. Vaughan. This company proceeding to manufacture Turner's patent smutter and separator combined, the separator being a contribution to the success of this organization by myself, I neither asking nor receiving any royalties therefor, this company proceed with encouragement, visit Chicago, make the acquaintance of Thomas H. Baxter, of that city, a man engaged in the mill-furnishing business and a man apparently full of energy and equal to the task of selling almost anything in his line, whereby he had retained to him a good commission. He accepts the agency for Turner, Parks & Co., selling this combined smutter and separator.

Soon after this condition of things had got well agoing, and which was about the year 1856, I left Cuyahoga Falls, Ohio, going to New York City. While there, I was at once thrown into daily communication with the board of trade or grain men in that city, and there was so much complaint about the oats found in western spring wheat that I was urged to try and devise some means whereby the oats could be separated from the wheat. Having had long experience in such business, set to work and devised the present J. L. Booth's patent separator, constructed a model containing the series of zig-zag sieves; here I had a proposition made me by one G. W. Burbank, proprietor of the Crescent Mills of Rochester, N. Y., to wit:

If I would, at my own expense, construct a set of machinery on my plan, large enough to fill the requirements of his mill at Rochester, a mill of the largest class, running 9 run of stones; and if the machine worked to his satisfaction he would pay the whole expense. This agreement was made in the winter of 1858-9. Early in the spring of 1859, I left New York City, went directly to Cuyahoga Falls, Ohio, with my drafts and plans for a large sized separator; applied to L. Hatfield & Co., who had for years before manufactured my separators heretofore described, to build for me a machine.

Now this firm of Turner, Parks & Co. was situated nearly one-half mile from the works of L. Hatfield & Co., and there was not necessarily any intercourse between the two concerns, except the former obtained (in part at least) their castings at the works of L. Hatfield & Co., and was often at or about the works of the latter, either on legitimate business or in the capacity of a spy, but certainly had no business in the upper or second story of the factory of Hatfield, where my machine was being constructed. Here the excitement, curiosity, suspicion, and jealousy began. "Booth is back again, getting up a machine for taking out the oats from wheat—he is fooling away his time—it can't be done—a thing tried over and over again for the past twenty years—and it never was done, neither can it be done." These and kindred remarks coming to my ears almost daily, and reported on the streets as having been said by

some one of the members of this Turner, Parks & Co., who, it would seem, ought to have been satisfied in using the old separator of Booth's in combination with their smutter.

However, Booth was not dismayed—went on and completed his machine, which was of large size, the riddles being some 6 feet in length, while the fan was 4 feet, and constructed in every particular like the view represented on my sheet of claims, except the view only shows an end view or elevation. This first machine of any practical size ever made was temporarily tried in the shop were made, then shipped to Rochester, N. Y., set up and started in the Burbank or Crescent Mills of that place on the 1st day of June, 1859.

It was a great success, and caused much excitement in this great milling centre. Several of these machines were at once ordered and built at Rochester; two of them were at once made and set up in the Frontier Mills of Black Rock, N. Y., and which were started on the 15th of September, 1859, and before the canal closed that year a boat load of clean oats was shipped to New York, which brought 2 cents per bushel more than common oats, all of which were taken direct from these separators and all of which were gleanings from No. 2 spring wheat.

This fully established the practicability of the machine, and from this first demonstration has come nearly all the other oat-extracting machines since constructed.

The success of this machine was a thorn and source of annoyance in the dormant minds of this Turner, Parks & Co.; but it appears that before this first machine left Cuyahoga Falls it must have been considered important that the plan of it should be taken, and if it was possible that it did succeed, it would afford a clue, or at least a nucleus about which another machine might be constructed, as it appears the sequel will prove to have been the case. I had, however, applied for a patent and on my return from Black Rock soon after September 15, 1859, where I had been to superintend the starting of those machines, I learned that my patent had been granted, and I also learned that this same Turner, Parks & Co. (who had, all these four or five months contented themselves in scouting at the idea of Booth in his effort to do what could not be done) had got up a separator that would take out the oats from wheat; some gentlemen had been invited in to see it, and said that it looked just like mine. I went directly to the works of Turner, Parks & Co., asked Parks and Turner if these reports were true. They said they had a new machine, the invention of their partner, Vaughan, they believed. I asked to see it; was refused; I replied that I had been told it was like my machine, and if so they must not make it, for I had received a patent for it. This appeared to surprise them; they said they would show it to me, and if it was like my machine they would not make it. They did show it to me, and I did so declare that it was the same, and left the factory, with their assurance that they would not build any more.

415 I will here state, that in my visit to the factory of Parks & Co., to my surprise, I found complete my set of, or series of, zigzag sieves arranged in the same manner—same number of sieves; same sized hole; same degree of pitch to each sieve; same plan of return-boards; same width of sieve; same rapid motion, and precisely the same arrangement, as perfect as I could have made it myself, a fact which this company, or any of its members, have never yet denied.

They had arranged the series of sieves cross-wise the fan, instead of lengthwise, which was different in that relation to the one first made by me at Hatfield's shop a month before, but not first drafted and planned by me as more compact for small mills. The plan of seiving was the

same, while the blast-spout and fan was the same as I had used, and which was contained in my patent of April 8th, 1851, and the same as the one used by them in their smutter combination. The giving the nest of sieves a quarter turn did not in any respect bring about any different result. The grain first passed on to the zigzag sieves, and over and through them and their directing boards on to the last directing board, which directed the grain on to the cockle-sieve. The cockle and fine dirt, sand, and small stuff coming out at one end of the machine, while the chaff and dust, screenings, &c., came out at the opposite end. The grain, from beginning to end, going through precisely the same operation.

No new results had been obtained, neither no new action or new and different process had been given the grain in its passage through, or in its departure from the machine, any more than to turn my machine to blow to the north one day and to the south the next day.

Leaving this town of Cuyahoga Falls, I took up my residence in the city of Rochester in the fall of 1859, commenced the manufacture of my machines, both for large and small mills, supposing that this company would not be so impudent or assume the liability thus incurred in continuing or resuming the manufacture of it.

I visited Chicago with my machines that same winter, having my machines on exhibition under the board of trade rooms, on the 9th of January, 1860; called on this Thos. H. Baxter to accept the agency in the sale of them; but was told that Turner, Parks & Co., who had supplied him (Baxter) with smutters, was about to appear on the ground with a separator for him to sell that would extract oats, &c.: consequently I made J. T. Noye my agent, who sold some machines, but was soon overtaken by this same first machine shown me by Turner, Parks & Co., at Cuyahoga Falls, and put now into the hands of Baxter, offered at a less price and put into the market with all the zeal and cunning better illustrated by Thos. H. Baxter himself.

I then resort to the law, go to Chicago, employ a high-priced law firm of that city, and expend several hundred dollars, and upon examination find that in my claims (see claims of original patent of 1859) my patent attorney had combined with the zigzag sieves and boxes B C, having a shake motion, the troughs E. Vaughn had no trough E, consequently in order that Vaughn's machine should infringe, he must use precisely the same combination. This trough made of zinc and fastened like an eaves-trough to the edges of the two lowermost sieves, was not considered by me anything but a convenience to spout out the oats, and not really any important part of the invention; still there it was, and I must reissue my patent to enforce my rights to the invention proper. Hence, by reference to my first reissue, it will be seen that I claim the zigzag sieves with or without the trough E.

Now at this point in the history comes Vaughn with his first letters patent on the same machine, dated April 29, 1860, 8 months after the date of my first patent, and nearly one year from the time I had built the first separator at Cuyahoga Falls, as before stated. His two claims (as will be seen by reference) have reference to the relative position of the nest of sieves to the wind spout and fan, claiming (indefinitely) a short fan. Also, the direction of a directing board, cockle-sieve, &c.; all for what purpose? "So that," as his claim says, "the cockle, &c., shall be delivered at one end, while the dust and chaff shall be delivered at the opposite end of the machine"—a wonderful invention and result, while my machine did the same thing. Now, Vaughn finds that I have been in the market for months with my machine arranged just in the same

manner, and that I have again commenced a suit against his agent Baxter, under my reissue, backs down from his position and apparently deserts his efforts to circumvent my progress, and gets up what he calls a zigzag machine in 1861, with sieves inclining in one direction, while the return boards incline in another direction; this, as he says, "the Patent Office refused to grant him as he wanted it, until April 19, 1870." Now he has got what he wanted, he proposes to make all persons using sieves inclining in one direction and return boards in the other pay him, as they all infringe. I will say as to that, that he will be mistaken; for in my original machine is found precisely the same thing, and the Patent Office has, no doubt, overlooked this point. The fact that the Patent Office has, by inadvertence, granted him this claim, does not establish a well-settled point to the contrary notwithstanding, viz: "that the less cannot be taken from the greater;" if my separator of 1859 includes his claim, and more added, it certainly does not give him the right of discovery. For illustration: Suppose I take his zigzag machine as it is, and slide into it an extra sieve between each of his sieves, or an extra or additional return board, does it destroy his claim, provided his claim was new and valid? Not so. Neither can he remove one of the sieves from between the sieves of my machine, and claim that he has made a discovery. Such a patent will not stand the test of law.

416 But to return to Vaughn or Baxter's defence of my suit. Finding that my reissue was likely to overtake them, their next resort was to try and find that my machine, so far as the zigzag sieves were concerned, was old, and to that end found that to one of my old separators patented 1851, sold to an Akron (Ohio) miller, this machine (see cut in this report), having but one sieve, the miller had fixed upon and over this sieve another sieve having a reverse inclination, and with a return board. This being prior to my patent of 1859, it was thought by this high-minded company called Turner, Parks & Co., that it would work destruction to my oat-separator. Take notice here that the Akron machine never was used for the separation of oats from wheat (neither could it do so); and withal, winter wheat was exclusively ground there. The object of this extra sieve was to riddle out straws and sticks, and more thoroughly rid the grain from coarse stuff. No other machine was made like it. No more was ever used in that manner, and it was not even considered worth the cost of a patent. Notwithstanding all this, I concluded to again withdraw my suit at an expense of several hundred dollars; make a second application for a reissue, after first publishing a notice in the Chicago Tribune, warning and notifying all persons against using machines infringing on my patent. My reissue being obtained, I went again to Chicago, employed another attorney, commenced another suit against this Baxter and others using the machine. This case was not followed up, as other prior engagements would not release my time.

To remove all further argument as to the Akron machine containing any prior similarity, I confined myself in the last reissue to the combination of a series of zigzag sieves with a lateral shake motion, the same of course as was found in my model, and which was not found in the Akron machine but is used with the zigzag sieves in the Vaughn machine as well as mine.

The position of my patent stands now as it did then: public in the eye of the law to all infringers and to the manufacturers and venders, and well known by most of them to be an infringement of the boldest character. This Turner, Parks & Co., not content with manufacturing their smutter with my patent of 1851 attached to it, have ever since

made it without my consent in the same form and style as when Turner sold it for me, and as a separate machine, and sold it to elevators and warehouse men throughout the country, realizing largely thereby, selling to Chicago elevators and mills through their agent, Baxter, during a period of seven years to the expiration of the patent in 1865. This enterprise was carried on at once, and in addition to their oat-separator and other kindred machines, after I left Cuyahoga Falls in 1856 or 1857, notwithstanding their promise to me not to do so, as in the case of the zigzag machine. This has ever since been going on, and is now.

This Turner, Parks & Co. have never, to my knowledge, made anything but what had been previously made by me, patented by me, or used in my grain-cleaning machinery, except their very inferior smut machine. Their whole business with that exception, so far as I have ever been able to discover, has been founded on my old patents. Some patents have been granted them for trifling attachments, such as a stationary receiving trough, to carry out the oats in place of my shaking trough E; but the machine patented to me in 1859, and called Booth's zigzag separator, contains all that is meritorious and worthy of welcome to any miller in this kind of a separator, and there it will remain in the Patent Office for my benefit, and to furnish me with the proof of my early and well-earned discoveries in this line of invaluable machines to the miller as well as to the cereal interests of our Western country.

We shall now await results, but with no anxiety as to how it will terminate, believing that the wise laws of our country will yet protect the honest and true inventor. If Turner, Parks & Co. had been true to themselves, true to the millers of the West, and true to me, they would have applied to me for a license to use what was previously patented to me; what was and now is in my machine of 1859. Then, if they could have in any manner improved upon it and obtained patents for those improvements, all would have been well and right; but no; all that there was in their machine of any value was first found in mine, and they knew it. They had rather impose upon the unsuspecting miller, and obtain their large profits under the cover of patents obtained at a later date upon unimportant additions to the main and principal feature of merit underlying and found in my patent of 1859.

To show that others have experienced the severe lessons of buying separators manufactured by this Turner, Parks & Co., and sold by T. H. Baxter, one elevator in Chicago paid me five hundred dollars rather than defend a suit about to be brought by me for infringement in the use of one of these warehouse separators, patented to me in 1851. They considered it an infringement, and so paid me. This was before the expiration of that patent. There is very much more that I would like to communicate connected with this affair, but my story is now a long one. I have gone over the ground in a general sense, hoping to give you some light upon the subject, and hoping it may prove of service to you in the future, if you have to deal with these parties or any of their agents.

Very respectfully submitted,

J. L. BOOTH,
Patentee.

ROCHESTER, N. Y.

417 *Exhibit No. 6.*

The United States of America, to all to whom these letters patents shall come:

Whereas, John Bean and Benjamin Wright, of Hudson, Mich., have

alleged that they have invented a new and useful improvement in smut ma
chines, which they state has not been known or used before their applic
tion; have made oath that they are citizens of the United States; that the
do verily believe that they are the original and first inventors or disco
erers of the said improvement, and that the same hath not, to the be
of their knowledge and belief, been previously known or used; have pa
into the Treasury of the United States the sum of thirty dollars, and
presented a petition to the Commissioner of Patents signifying a desir
of obtaining an exclusive property in the said improvement and praying
that a patent may be granted for that purpose:

These are therefore to grant according to law to the said John Bear
and Benjamin Wright, their heirs, administrators, or assigns for th
term of fourteen years from the sixth day of February, one thousand
eight hundred and fifty-five, the full and exclusive right and liberty o
making, constructing, using, and vending to others to be used, the said
improvement, a description whereof is given in the words of the said
Bean & Wright in the schedule hereunto annexed and is made a part o
these presents.

In testimony whereof I have caused these letters to be made paten
and the seal of the Patent Office has been hereunto affixed. Given u
der my hand at the city of Washington, this sixth day of February i
the year of our Lord one thousand eight hundred and fifty-fiv
418 and of the Independence of the United States of America the se
enty-ninth.

ROBERT McCLELLAND,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[SEAL.] C. MASON,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of th
same.

To all whom it may concern:

Be it known that we, John Bean and Benj. Wright, of Hudson, I
nawee County, and State of Michigan, have invented a new and usefu
improvement in grain-separating and smut machines, and we do herel
declare that the following is a full and exact description thereof.

This invention relates to an improvement in the description of ma
chines which furnishes the separation of the smut and other impurities
from the grain by causing the air in its ingress to the fan to be drawn
through the smut scourers and revolving screens.

The nature of the improvement above adverted to consists in supply
ing air to the fan of a separator, the shoe of which is arranged in connec
tion and at right angles with a smut machine, by causing said air to pass
through the smut scourers on its way to the fan as hereinafter specified.
By having the air go through the smut scourers and revolving screens it
assists the purifying operations.

To enable others skilled in the art to make and use our inven-
419 tion, we will proceed to describe its construction and operation,
reference being had to the annexed drawings forming a part of
this specification in which——

Fig. 1 is a top view of our improvement.

Fig. 2, a side sectional elevation through lines YY.

Fig. 3, and end sectional elevation through lines XX.

Fig. 4, a side sectional elevation through lines ZZ.
Similar letters of reference indicate the same parts.

A, frame of separator; B, fan case of same; C, screen case; D, main shaft upon which the fan E, and revolving screens M, N, are attached; F, primary sieve; H, secondary sieve; I, driving-wheel shaft; J, K, pulleys upon same; L, bands from K to screen pulley K^1; O, lifters on the interior of screen; M, P, smut cone; P^1, fastening pin of same; Q, spiral spring on shaft D, which adjusts the smut cone; R, grain receiving box; S, grinding blades on the cone; R, T, shell of the smut cone; P, U, air entrance; V, dirt box; W, seed exit.

My separating apparatus is arranged much in the usual manner. The grain falls from the hopper upon the inclined receiving board F, down which it passes on to the primary sieve G, whence it falls on the secondary sieve H, and thence to the ground, the chaff being separated and blown out in the direction of arrow 1.

The driving-wheel shaft I, extends through the separator, where it has a pulley, K, which gives motion by band L and pulley K^1, to the screens M, N. The shaft D extends through both the separator and the smut apparatus, but the screens do not turn with the shaft. They merely have bearings upon it, their speed being much slower than that of shaft D.

After the grain has been passed through the separator, it
420 is placed in the receiving box R, the bottom of which is inclined (as shown in fig. 2) to be operated upon by the smut cone P.

The smut cone P is solid, its periphery being furnished with spirally arranged grinding blades S, between which and the shell T the grain is scoured and the smut pulverized. The shell T and the grinding blades S are perforated with small holes through which the air, entering at U, finds its way into the screen M, to the fan E, carrying with it the chaff or light dust, and discharging the same at the mouth of the separator in direction of arrow 1. Arrows 2, 3, 4, 5, show the direction of the air in its ingress to the fan.

The cone P has the same rapid movement as the shaft D, with which it turns, being secured thereon by pin P^1. The shaft D, is slotted so as to admit pin P^1, and thus allow a lateral movement of the cone P, during its rotation. S is a spiral spring wound around the shaft D, which serves to push cone P into contact with its shell T, and rendering the cone self adjusting; for when the grain between the shell and cone blades, or, becomes wedged, or when the passing grain contains no smut, the cone recedes from its shell and permits the free inward passage of the grain, without injuring it by unnecessary scouring.

The smut dirt passes through both the revolving screens M, N, and falls into the dirt box V; a portion of the grain is carried along in the space between the lower parts of screens M, N, and emerges at the exit place W; any grain remaining in the coarse screen M, which the adherence of smut or chaff prevented from falling between the screens is carried along until it reaches the lifters O, which carry it up to the top of the screen, whence it falls to the bottom, and so on, until by fre-
421 quent plunges against the bottom of the screen the foreign substances are broken off and carried into the fan, while the grain passes through the exit place W.

Having thus described our invention, we do not describe as our invention the leading of a draft through the smut scourers and revolving screens, irrespective of the manner of effecting the same; but,

What we do claim as our invention, and desire to secure by letters patent, is supplying air to the fan of a separator, the shoe of which is arranged in connection and at right angles with a smut-machine, by

causing said air to pass through the smut-scourers and revolving screens of said smut-machine on its way to the fan, as herein described, and for the purpose set forth.

JOHN BEAN.
BENJ'N WRIGHT.

Witnesses:
E. AMES.
W. H. COGSWELL.

(Here follows diagram, marked page 421.)

422 *Exhibit No. 7.*

The U. S. Patent Office, to all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy from the files of this office of the specification and drawing in the matter of the application of John Bean, filed May 19th, 1853, for "Imp't in Grain Separators."

In testimony whereof I, Sam'l A. Duncan, acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this eighth day of January, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

To all whom it may concern:

Be it known, that I, John Bean, of Hudson, in the county of Lenawee and State of Michigan, have invented a new and useful improvement in grain separators, and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, making a part of this specification, in which—

Fig. 1 is a side view of my improved separator, the side of the machine nearest the eye being removed for the purpose of showing the working parts.

Fig. 2 is a plan or top view of the upper sieve or screen. Similar letters of reference indicate corresponding parts in each of the two figures.

This invention relates to a new and useful improvement in grain separators, and consists in the employment or use of guides and
423 spouts, attached to the upper screen, by which the wheat is cleansed from all coarse foreign materials before the blast acts upon it. The blast, therefore, merely cleanses the grain from light substances, which it readily does without throwing out any perfect grain, the blast not requiring to be so strong as those used in ordinary separators, as there is not so much work for it to do. This will be fully explained hereafter.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a fan, enclosed by a suitable case; B and C is a shoe, placed before the fan, having the screens D F at its upper part, and a screen, F, at its lower part, all the screens being somewhat inclined; the lower screen, F, being inclined in a reverse direction from the two upper ones, D E.

On the upper surface of the upper screen, D, there is placed a triangular or V-shaped guide, G, more particularly shown in Fig. 2. This

guide conducts the coarse foreign materials that will not pass through the screen D into the spouts H H, at the front of the screen, one spout being at each corner; the grain being smaller than the mash of the screen D, passes through it and falls upon the screen E, directly beneath the screen D. The small seeds pass through this screen E, and fall upon a bottom board, I, and pass into the spouts H H, which extend downward to the bottom board.

424 The mash of the screen E will not allow the grain to pass through it, and it is consequently shaken off at the inclined end of the screen E, and falls upon the lower screen F, and is subjected, as it passes down this screen, to the blast of the fan A, and is thoroughly cleansed from dust and all foreign matters of little specific gravity.

The grain, it will be seen, is not subjected to the blast while upon the upper screens D E. The bottom board I protects it from the blast, and all the coarse foreign matters and small seeds are separated from the grain before the blast acts upon it, the upper screens accomplishing this separation; the blast, therefore, merely cleanses the grain from dust and other light matters.

In the ordinary separators in use much dependence is placed upon the blast to cleanse the grain from heavy foreign matters, and the blasts are generally sufficiently strong to throw out perfect grain. In my improved machine, the coarse and even the fine foreign matters, which possesses considerable gravity, is separated by the upper screens without the aid of the blast, and the grain is perfectly separated from all impurities at one operation. The shoe C has the ordinary shake-motion communicated to it in the ordinary way.

I am aware that there exists a multiplicity of devices, so far as the arrangement of screens in separators is concerned. I therefore do not claim the arrangement of the screens.

425 But, having described the nature of my invention, what I claim as new and desire to secure by letters patent, is the combination of the triangular or V-shaped guide G and the spouts H H, applied to the upper screen, as shown and described, for the purpose of separating the heavy foreign matter from the grain before the grain is subjected to the blast, and by which operation the advantage set forth in the specification is obtained.

JOHN BEAN.

Witnesses:
JONATHAN BEAN.
BENJAMIN WRIGHT.

Ex'd.—K. F.

(Here follows diagram, marked page 425.)

426 The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the specification and drawing in the matter of the letters-patent granted Stephen M. Yeaman, dated June 20th, 1846, No. 4591, for "imp'ts in the wheat fan."

In testimony whereof, I, Samuel A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twelfth day of January, in the year of our Lord one thousand eight

hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

Stephen M. Yeaman, Elizabethtown, Kentucky. Letters patent No. 4591, dated 20 June, 1846.

To all to whom these presents shall come:

Be it known that I, Stephen M. Yeaman, of Elizabethtown, in the county of Hardin and State of Kentucky, have invented new and useful improvements in the wheat fan, and that the following is a full, clear, and exact description of the principal or character thereof, which distinguishes them from all other things before known, and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which figure 1 is an isometrical projection, and figure 2 a longitudinal vertical section of the machine. The same letters indicate like parts in all the figures.

The nature of my invention consists in dispensing with the shoe
427 used in common fans, and causing each of the riddles to act independently of the others and in opposite directions, thus equalizing the vibrations and preventing the machine from choking.

The construction is as follows: The frame (*a*) and fan (*b*) are constructed similar to those now in use; the hopper (*c*) is an oblong trough standing on the top of the fan-case and inclining down at a proper angle at its front end which is open, as shown in the drawing, the other end being furnished with a cross piece that is fixed high enough above the bottom of the hopper to allow an endless apron (*d*) to pass between them. This apron or feeding *leest* is made to pass around a small roller (*e*) at the front of the hopper, and thence under the bottom of the hopper around a larger one (*f*) placed behind said hopper, which is connected with the moving power by a band, (*g*). On this apron (*d*) are fixed transverse slats at proper intervals, and by it the wheat or other grain in chaff is fed into the machine. Below the front roller (*e*), above named, there is a bar (*h*) that extends across the machine, parallel with said roller, and projects beyond the sides of the machine, resting on two friction-rollers on which it plays back and forth propelled by its connection with an arm (*i*) extending back from an upright shaft (*i*) placed in suitable bearings outside the frame. This bar (*h*) is furnished with a row of fingers (*h'*) that project forward over the upper riddle and receive the contents of the hopper and distribute it properly over the riddle. Below the line of the above-described teeth there is a narrow horizontal slit (*x*) cut through each side of the machine of a size suitable for the upper riddle (*k*) to slide through; the front and back pieces of the
428 frame of this riddle project beyond the sides and rest on small friction-rollers (*y*) placed beneath them outside the slit through which they play.

The riddle is connected with an arm (*i''*) that projects forward from the upright shaft (*i*) by a common link by which the riddle is vibrated; the wire of the riddle is made to extend over about one-fifth more surface than it could if the riddle was placed in a shoe; to each of its side pieces a strip of leather (*m*) is attached which is fastened by its other edge to the side of the machine; this prevents the escape of the grain sideways. Another finer riddle (*n*) is placed just below the one above described, and arranged alike in every particular; below these there is

sieve (*o*) which inclines at an angle of about twenty degrees (more or less) backward; at the upper or front end this sieve is suspended on a pivot (*p*) at its centre, and its lower end is connected with an arm (*i'''*) that extends back from the shaft (*i*) near its lower end, which causes it to play in a slot as the riddles do. It will be observed that the arms which move this sieve, and the finger-bar, are on the side of the shaft opposite to those that move the riddles, and consequently when the shaft is vibrated they will move in contrary directions.

The shaft (*i*) is vibrated by a short crank (*q*) on the axle of the fan-shaft, connected by a pitman (*r*) with an arm (*5*) on said shaft, placed at right angles to the others and standing out from the machine; below the sieve are the usual shute boards for delivering the grain, &c.

By this construction the moving parts run much lighter than in the ordinary machine, and as the riddles, fingers, and sieve shake in opposite directions, there is no danger of clogging, while at the same
429 time the motion and force acting upon the stationary parts of the machine are equalized, and the whole is kept steady when in swiftest operation, and a much greater quantity can be fed into the machine in a given time without choking, thus admitting the employment of the feeding belt, which could not be used in ordinary machines.

Having thus fully described my invention, what I claim therein as new and desire to secure by letters patent is the mode of operating the riddles, sieve, and finger bars, and combining them with the grain-fan, substantially in the manner described, so that each shall move independent of the others, and their motions be antagonistic, while a much greater surface of riddle can be embraced in the same sized machine than is possible in the ordinary mode of construction.

I also claim, in combination with the above-named parts, the feeding apron, as hereinbefore described.

STEPHEN M. YEAMAN.

Witnesses:
J. J. GREENOUGH.
A. P. BROWN.

(Here follows diagram marked page 429:)

430 *Exhibit No. 9.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the specification and drawing in the matter of the letters patent granted Jonathan L. Booth, dated April 8th, 1851, No. 8033, for "imp't in fan-blast grain separator."

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this eighth day of January, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.]

SAM'L A. DUNCAN,
Acting Commissioner.

Jonathan L. Booth, of Cuyahoga Falls, Ohio. Letters patent, No. 8033, dated April 8th, 1851.

To all whom it may concern:

Be it known that I, Jonathan L. Booth, of Cuyahoga Falls, in the county of Summit, and State of Ohio, have invented certain new and useful improvements in the fan-blast grain separator, and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, in which—

Fig. 1 is an isometrical view.

Fig. 2 is a longitudinal vertical section taken at or near the centre.

Similar letters refer to the same parts in both figs.

The nature of my invention consists in a box having an inclined
431 bottom mounted near the upper part of a suitable frame, and having a shaking chaffing screen and hopper placed above it. Below the bars is a fan from which a trunk proceeds upwards past the end of the box, the lower end of whose inclined bottom opens into the said trunk; the upper part of the trunk has one or more curves or bends, the bottom side or sides of which are provided with a spout or spouts opening downwards, and its mouth is provided with a shutter for regulating the widths. The grain is fed into the hopper, and falls through the screen into the box, from whence it is passed in the trunk, where it is met by the blast, and the lighter parts carried up, the best grain falling through an aperture at the bottom of the trunk and the lighter grain thro' the spouts in the bends of the trunks, the chess and other light particles passing out at the mouth of the trunk. The blast also passes through the box and chaffing screen, the relative proportion of its force through the chaffing screen and through the trunk being governed by the shutter in the mouth of the trunk.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A A is the frame, consisting of vertical posts and cross pieces.

B is a box of the whole width of the frame, its bottom A inclining downwards toward the trunk of the blower.

C is a screen placed at an inclination over the top of the box B. It
hangs on hinges or joints at *b*, and is agitated or shaken by a cam
432 *c* on the main shaft R, which hangs in bearings *r r* under it. D is a hopper having an opening at *e*, which is closed entirely or partially for regulating its size by a sliding shutter *f*, secured in place by a bolt or catch *g*. The highest end of the bottom of the hopper rests on stationary pins at *h* on the frame A A, and its lower end on the frame of the screen, the hopper and screen being agitated or shaken together. A row of lines *i i* are placed in front of the hopper, reaching nearly across the screen.

Harrow plates of metal *s s* are placed across the interior of the box.

E is a rotary fan or blower, from which a trunk F proceeds upward. One side of this trunk forms a side of the box B, and there is an opening *k* in it communicating with the box at the lower part of the inclined bottom. There is also another opening at the bottom of the trunk.

The upper part of the trunk has a bend at G, which turns at nearly a right angle to the upright part, and at the bottom of the bend there is a spout H converging towards its mouth, which is narrower than the part opening from the trunk. There may be more than one of these bends G, each provided with a similar spout. Above the bend the trunk again

PARKS ET AL. VS. BOOTH. 173

turns upwards, and its mouth I opens either upwards or is again bent or curved, as shown in the drawings.

J is a shutter formed of light sheet metal of the whole width of the trunk. It is hung on a pin or hinge *l* a short distance within the mouth I of the trunk, and is capable of laying close to the upper side of the mouth so as to leave it quite open. There is a series of holes *m m* on
433 each side of the mouth, through any pair of which a pin or rod *n* is placed across the mouth to support the edge of the shuttle and keep it open to any desired width. If this pin *n* is removed the shutter would close of its own weight.

K is a shaft hung on bearings *o* at one end of the frame. It carries a pulley L on one end and another pulley M at its other end.

N is an endless band running from the pulley L to a small pulley *o* on the blower shaft *p*. P is another endless band running from the pulley M to a pulley Q on the main shaft R, which receives rotary motion through a winch handle *s*, or by any other means.

T is a box or drawer placed below the operator.

The operation is as follows:

Rotary motion being given to the main shaft R, agitates the screen C and hopper D. The bands N and P communicate a very rapid rotary motion to the blower, sending a strong current or blast of air through the trunk F, part of the said blast going upward and entirely through the trunk, and part escaping through the opening K into the box B and out through the screen C, a small portion also escaping through the spout H. The blast through the box B and screen C can be regulated by the shutters I, which, if opened wide, will allow a small portion only to pass through the opening K to the box, but, if nearly closed, will cause the greater part to pass in that direction. The grain is fed into the hopper D, and passes through the opening *c* to the screen C, where the chaff is separated and blown away, the grain falling through the screen into the box B, down the bottom of which descends through the opening
434 *k*. The *the* plates *s s* conduct the blast upward away from the bottom *a*, and prevent the blast collecting the grain in heaps upon it, which would be the consequence if they were omitted.

As the grain runs through the opening *k* into the trunk F the heavier and better portions descend the trunk in a direction opposite to the blast, and fall through the opening *d* into the box T, the lighter portions of the grain being carried by the blast up the trunk, where a farther separation takes place at the bend G, where the blast is again divided, and the heavier portion of that which has been carried up the trunk (which consists of the lighter portion of the good grain) falls out through the spout H. The chess and those parts of little value, and any small chaff which might pass the screen, are carried out at the mouth I. The shutters J will control the relative proportions of the blast which pass through the opening *k* and the upper part of the trunk G I, which may be regulated to suit the nature of the grain.

What I claim as my invention and desire to secure by letters patent, is the blast passages F, G, and K, arranged and controlled by the shutters J, in the manner and for the purposes substantially as hereinafter set forth.

JONATHAN L. BOOTH.

Witnessés:
S. H. WALES.
O. D. MUNN.

(Here follow 2 diagra ns, marked page 434.)

435 The U. S. Patent Office. To all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the reissue letters patent, granted James A. Vaughan, dated June 11th, 1861, No. 90, for "Imp't in Grain Separators."

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this fourteenth day of February, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety sixth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

Reissue No. 90. Whole No. 1195.

The United States of America to all to whom these letters patents shall come.

Whereas James A. Vaughn, of Cuyahoga Falls, Ohio, has alleged that he has invented a new and useful improvement in grain separators for which letters patent were issued to him, dated April 24th, 1860, the same surrendered and new letters issued to him, dated January 8th, 1861, which last letters having been surrendered by him, the same have been cancelled and *and* separate letters ordered to issue to him on *an* two amended specifications, which hes states has not been known or used before his application; has made oath that he is a citizen of the United States that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not to the best of his knowledge and belief been previously known
436 or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said James A. Vaughn, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-fourth day of April, one thousand eight hundred and sixty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said James A. Vaughn, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this eleventh day of June, in the year of our Lord one thousand eight hundred and sixty-one, and of the Independence of the United States of America the eighty-fifth.

CALEB B. SMITH,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[SEAL.] D. P. HALLOWAY,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, James A. Vaughn, of Cuyahoga Falls, in the County of Summit, and State of Ohio, have invented certain new and useful improvements in grain separators, and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accom-
437 panying drawings, making a part of this specification, in which

Fig. 1 represents a perspective view of the machine with a portion broken away to show the interior;

Fig. 2 represents a longitudinal vertical section taken through the machine; and

Fig. 3 represents a vertical transverse section through the same.

Similar letters of reference where they occur in the three several drawings, refer to like parts of the machine in all the figures.

In the separation of grain from the impurities that are ordinarily gathered with it, and also in the separation of oats from wheat, a long series of zigzag screens and a long fan have been used. This arrangement, however, is very objectionable, first, because the long screens are difficult of access, are liable to become clogged, and must be often cleaned to make them efficient, and cannot readily be got at; and, second, a long fan cannot be made to produce an uniform blast throughout the wind trunk, because the air must be drawn into the fan case at the ends only and none at the center, the consequence of which is that there is a sharp blast at the ends or sides and comparatively no blast in the centre portion of the wind trunk. These two imperfections in the long screens and long fan make a grain separator, constructed after such a plan, of comparatively little or no practical value, and my object and aim has been to overcome these objectionable features and which I
438 have effectually done as and in a manner which I will hereafter explain.

The nature of my invention consists in combining a series of short zigzag screens and directing boards that have a shake-motion communicated to them with a short fan, so that the screens may be readily got at to clean them, and the short fan make an uniform blast throughout the width of the wind trunk. Or the nature of my invention may be stated in this form: a series of zigzag screens and directing boards that have a shake-motion communicated to them, with the riddles arranged endwise to the fan trunk, which arrangement avoids all the defects above mentioned that attach to the long screens and long fan.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents the main frame of the separator, in which I hang a second frame, B, that contains the series of zigzag riddles, C, D, E, F, G, H, I, and underneath the riddles respectively, the series of inclined directing boards, J, K, L, M, N, O. These riddles and directing boards incline across the machine on the narrow way of the frame, and their ends are towards the fan trunk, which admits of their being easily cleaned from one end of the machine and without being incommoded by the blast trunk, as is the case when arranged lengthwise of the machine. The frame B, with its riddles, receives a shake-motion by means
439 of the eccentric *g* on the shaft W, or by any other known means of accomplishing this object.

The fan case V is arranged across the frame so as to contain a short fan,

T, the short fan case and fan admit of a more uniform current of air throughout the wind trunk S than a long fan case, fan, and wind trunk can possibly admit of for reasons above stated.

In the operation of this machine the grain that is to be cleaned and separated from other grains and impurities is fed in from a hopper over the opening *i*, and falls upon the first screen, the oats, sticks, &c., pass over the screen into the chamber V, whilst the wheat, with some smaller seeds, goes through the openings of the screen and on to the first directing board J, which in turn delivers them to the next screen where a similar operation goes on, and thence to another, and so on throughout the series, the oats falling over at the sides and the grain passing through the riddles until they arrive at the screen Q, where the cockle, &c., pass through said screen and the wheat is dropped into the blast in the wind trunk S at *a*, which takes out the lighter grains, dust, &c., the heavy wheat coming out at *d*, the lighter wheat at *c*, and the dust, &c., at *b*. The oats are delivered at *e* and the cockle at *f*, and thus each separated thing is delivered at a separate place.

The leading characteristic of this invention, however, is the
440 short riddles and the short fan, the riddles being arranged endwise towards the fan by short riddles; I mean short in the direction in which the grain passes over them.

Having thus fully described my invention, what I claim herein as new is, the combination of the series of zigzag riddles and directing boards having a shake-motion imparted to them with a short fan, when arranged to operate therewith, substantially as herein described.

JAMES A. VAUGHN.

Witnesses:
P. G. SOMERS.
CHAS. HUNT.

(Here follows diagram marked page 440.)

441 The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted J. L. Booth, dated September 20th, 1859, No. 25484, for "Improvement in Grain Separators."

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this thirtieth day of January, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

No. 25484.

The United States of America to all to whom these letters patent shall come:

Whereas J. L. Booth, of Cuyahoga Falls, Ohio, has alleged that he has invented a new and useful improvement in grain separators, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said

improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining
442 an exclusive property in the said improvement and praying that a patent may be granted for that purpose:

These are, therefore, to grant, according to law, to the said J. L. Booth, his heirs, administrators, or assigns, for the term of fourteen years from the twentieth day of September, one thousand eight hundred and fifty-nine, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said improvement, a description whereof is given in the words of the said J. L. Booth, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington this twentieth day of September, in the year of our Lord one thousand eight hundred and fifty-nine, and of the Independence of the United States of America the eighty-fourth.

JACOB THOMPSON,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[SEAL.]
S. T. SHUGERT,
Act'g Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, J. L. Booth, of Cuyahoga Falls, in the county of Summitt and State of Ohio, have invented a new and improved
443 grain separating device, and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section of my invention taken in the line *x x*, Figure 2.

Figure 2 is a vertical transvers' section of ditto taken in the line *y y*, Figure 1.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to separate oats and other foreign substances from small wheat, after the latter has been separated from sound heavy wheat by any of the known implements in use.

This invention, although capable of general application, is more especially designed to be used with my improved grain separating devices which were patented March 8th, 1859, and July 12th, 1859.

The within described invention consists in the employment or use of a series of inclined zigzag screens and boxes having a proper shake motion communicated to them and used in connection with a fan air-blast spout, the whole being arranged substantially as hereinafter described, whereby the desired end is attained.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it:

A represents a suitable rectangular frame in which a series of inclined screens B are secured by elastic pendants C. The screens B may be formed of perforated zinc or other sheet metal, and placed alternately in reversed inclined positions as shown clearly in Figure 2. Each screen B is placed on the top of what may be termed a shallow box, C, the boxes extending the whole length of the screens and receiving what passes through them and discharging the same on the elevated ends of the screens immediately below them, openings, *a*, being made at the lower part of each box C to allow the escape of the contents therefrom. The upper or most elevated part of each screen B is provided with a smooth or unperforated surface, *b*, said surface *b* first receiving the grain, and consequently their position is immediately below the openings *a*, that of the uppermost screen being immediately below the discharge corifice *c* of the hopper D. The screens and boxes are secured in proper position by uprights, *d*, which are attached to each end of them, the elastic pendants C being secured to the lower ends of the uprights. The hopper D is of the usual form, is about equal in length to the screens B, and is secured in the upper part of the frame A. To the lower parts of the uprights *d*, inclined troughs E are secured, said trough being so placed as to catch the droppings from the screens and discharge the same at the ends of the machine.

Within the frame A, and directly below the lowermost box C, a fan box, F, is placed, containing a fan, G. The fan G is of ordinary construction, as well as the box C, and the latter communicates with an upright spout or passage, H, which receives at about the centre of its h'ight the contents of the lowest screen B.

At one end of the frame A there is placed a horizontal shaft, I, from which the fan G is driven by belts *E*, one at each end. At one end of the shaft I there is also placed a pulley, *f*, from which a small shaft *g* is drawn by a belt, *g'*. The inner end of the shaft *g* has a bevel pinion, *h*, placed on it, said pinion gearing into a corresponding pinion, *i*, which has a crank, *j*, at one end, from which a shake motion is given the screens and boxes by a connecting rod, R.

The operation is as follows:

The grain to be separated, that is to say, the small wheat. mixed with oats and other foreign substances, which were separated from heavy wheat by my devices previously referred to, or by any grain separating device, passes into the hopper D and through the opening *c* on the uppermost screen B. The wheat and oats first strike the smooth or unperforated portion, *b*, of said screen, and the oats are turned flatwise, and will pass off the depressed end of the screen. Some portion of oats, however, will pass through, but they will be discharged by the box C on the next screen below, and will be subjected to a like operation, a majority of the oats being separated from the wheat during each passage over the several screens, and when the grain reaches the last or lowermost screen all the oats will be separated therefrom, the lowermost screen B being a cockle screen, the cockle being discharged from the lowermost box C. The chess and other light impurities are discharged with the wheat from the cockle screen into the spout H, and the chess and light impurities are blown upward out from the spout H, the wheat being discharged at *a*. The oats drop into the troughs E, and are discharged by them at each end of the machine.

This invention is now in practical operation and operates perfectly, separating oats from wheat, which would otherwise have been ground with the wheat into flour, for, so far as I am aware, no separator has been hitherto devised for separating oats from small wheat, which is about

of the same specific gravity as oats, and therefore precludes the separating by a blast.

I do not claim separately any of the within described parts, but I do claim as new, and desire to secure by letters patent, the inclined zigzag screen and boxes B C and troughs E, having a shake motion given
447 them, and used in connection with the revolving fan G and spout H, the parts being arranged relatively with each other to operate as and for the purpose set forth.

J. L. BOOTH.

Witnesses:
C. W. WETMORE.
T. F. HEATH.

(Here follows diagram marked page 447.)

448 *Compl't's Exh. Baxter No. 1.—E. G. T., Ex'r.*

BOOTH
vs.
TURNER ET ALS.

J. L. BOOTH'S GRAIN SEPARATOR.

Warning to those who may be applied to for damages sustained by an infringement on Booth's grain-separator.

The following letter will explain itself, and it may be proper to say that the selection by Messrs. Sturges, Buckingham & Co. and the other gentlemen whose names appear below of Mr. Whipple to make the examination was by reason of Mr. Whipple being the party engaged by all the railroads centering at Chicago to examine into all cases of alleged infringements that are being continually presented against such roads. This, of course, is sufficient endorsement of his ability.

TREMONT HOUSE,
Chicago, Feb'y 11, 1865.

Messrs. STURGES, BUCKINGHAM & CO.:

Having investigated the claim of J. L. Booth for an alleged infringement of his patent of April 8th, 1851 (reissued Nov., 1862), for an improvement in winnowers and separators, by your firm, in the use of the Childs' separator, I have come to the conclusion that the patent of Childs in no way infringes the patent of Booth, nor does the Turner machine, sold by T. W. Baxter & Co., infringe the aforesaid patent. The facts upon which I base my conclusion I have submitted to your counsel in the form of a written report.

Yours truly,
(Signed) S. M. WHIPPLE.

We concur in the opinion of Mr. Whipple with reference to the claim of J. L. Booth, and shall be governed by his advice in our course with reference thereto.

(Signed) STURGES, BUCKINGHAM & CO.

I concur in the above.
(Signed) HIRAM WHEELER.

We concur in the above.
(Signed) C. W. WHEELER & CO.
" WHITNEY & WOODRUFF.
" C. E. OLMSTED & CO.
" MUNN & SCOTT.

VAUGHN'S PATENT ZIGZAG GRAIN-SEPARATORS AND OAT-EXTRACTORS.

The very best machines yet invented for removing oats, sticks, and other impurities from wheat, thus enabling the Western miller to make a grade of flour from spring wheat never before attained.

Refers to the mills at Chicago and Milwaukee.

T. W. BAXTER & CO.,
Sole Agents for the West,
Chicago Mill-furnishing Depot, foot of West Washington st.

For identification, 126 X Q.—E. G. T., Ex'r.

450 *Complainant's Exh. Baxter No. 3.—E. G. T., Ex'm'r.*

CHICAGO, ILL., 16 *July*, 1860.

O. B. FORD, Esq.:

DEAR SIR: Understanding that Mr. J. L. Booth is in your city, trying to sell what he calls his repeating separators, we think it proper to inform you that our Mr. Baxter has just returned from Milwaukee, where he has been exhibiting the Vaughn zigzag patent grain separator and oat-extracter, and, while he has been quite successful in satisfying the millers that it is the very best machine yet brought out for the purpose and far superior to Booth's, who has 6 running there, we shall, however, enable you to judge for yourselves, as it is the intention of Mr. Baxter to visit Janesville at once, and exhibit the machine in question in full operation. We therefore give you this notice to prevent your having an inferior machine imposed on you. As we hear Mr. Booth has been circulating the report that our machine is a fac simile of his and an infringement of his patent, which is quite contrary to the fact, our claim being very different and distinct from that which he claims, Mr. B. will bring with him a certified copy of each patent; and we would further caution you to examine carefully and ascertain if the separator exhibited by Booth is made agreeably to the description given in his patent or not.

We remain, dear sir, yours very resp'y,

451 J. W. BAXTER & CO,
P'r J. G. BAXTER.

JANESVILLE, *July 23d*, 1860.

Mess. J. S. BOOTH & CO.:

GENTS: Enclosed is a letter, which please examine. Baxter says my machine I bought of you is an infringement on his patent, & that he is going to sue, &c. How is this?

Yours, &c.,

O. B. FORD.

452 *Defendant's account.*

1865.				
Jan.	10.	6, No. 2, Z. Z.,	Baxter & Co., Chicago, Ill's, 60....	360 00
Feb.	13.	4, No. 3, "	" " " " 80....	320 00
"	23.	1, No. 4, "	Lind & Bucher, Canton, we think, book don't tell.....	200 00
Mar.	14.	1, No. 3, "	Holmes & Blanchard, Boston, Mass.	97 50
	20.	4, No. 2, "	Baxter & Co., Chicago, 70.....	280 00
	28.	1, No. 2, "	J. Damp, Mansfield, O.....	100 00

April	20.	1, No. 2, Z. Z.,	Todd & Co., St. Louis, Mo	70 00
		1, No. 3, "	" " " " " "	90 00
May	5.	1, No. 2, "	F. Shumacher, Akron, O	100 00
	8.	1, No. 3, "	Holmes & Blanchard, Boston, Mass.	97 50
	23.	1, No. 2, "	Todd & Co., St. Louis, Mo	70 00
June	12.	2, No. 2, "	Baxter & Co., Chicago, Ill	140 00
		2, No. 3, "	" " same	180 00
	13.	1, No. 2, "	F. Schumacher, Akron, O	100 00
July	12.	2, No. 3, "	Todd & Co., St. Louis, Mo	180 00
	29.	1, No. 3, "	" " same	90 00
Aug.	15.	1, No. 2, "	Baxter & Co., Chicago	70 00
		1, No. 3, "	" "	90 00
	16.	2, No. 3, "	" "	180 00
	19.	1, No. 2, "	Todd & Co., St. Louis, Mo	70 00
		1, No. 3, "	" "	90 00
	26.	1, No. 3, "	Baxter & Co., Chicago	90 00
	29.	1, No. 2, "	Halteman, St. Louis, Mo	75 00
Sept.	4.	2, No. 2, "	Todd & Co., St. Louis	140 00
		2, No. 3, "	" "	180 00
	11.	1, No. 2, "	Halteman "	75 00
		1, No. 3, "	" "	100 00
	13.	1, No. 2, "	Baxter & Co., Chicago	70 00
		1, No. 3, "	" "	90 00
	26.	2, No. 3, "	" "	180 00
	Oct.	2. 2, No. 2, "	" "	140 00
453	Oct.	9. 2, No. 2, Z. Z.,	Baxter & Co., Chicago	140 90
		6. 1, No. 3, "	Halteman, St. Louis, Mo	100 00
Oct.	18.	1, No. 2, "	Damp, Mansfield, O	90 00
Nov.	27.	1, No. 4, "	Holmes & Blanchard, Boston, Mass.	150 00
Dec.	17.	1, No. 3, "	Halteman, St. Louis, Mo	100 00
	19.	1, No. 2, "	Baxter & Co., Chicago	70 00
	19.	1, No. 3, "	Baxter & Co., Chicago	90 00
1866.				
Jan.	3.	2, No. 3, "	" "	180 00
	11.	1, No. 3, "	Halteman, St. Louis, Mo	100 00
	16.	1, No. 2, "	" "	75 00
Feb.	12.	2, No. 3, "	Baiter & Co., Chicago	180 00
	17.	1, No. 2, "	J. Laysey & Bro, Cleveland, O	100 00
	20.	1, No. 3, "	Holmes & Blanchard, Boston	97 50
		1, No. 2, "	Halteman, St. Louis	75 00
		3, No. 3, "	" "	300 00
March	2.	1, No. 4, "	Daggett, Patten & Martin, La Fayette, Ind	200 00
	10.	1, No. 2, "	A. R. Elson, Magnolia, Stark Co., O.	100 00
	17.	1, No. 3, "	Todd & Co., St. Louis, Mo	90 00
	22.	1, No. 3, "	" "	90 00
April	13.	1, No. 2, "	Halteman "	75 00
	19.	1, No. 2, "	" "	75 00
		2, No. 2, "	Todd & Co., "	140 00
		2, No. 3, "	" "	180 00
May	11.	2, No. 3, "	Halteman, "	200 00
June	1.	2, No. 2, "	" "	150 00
	8.	1, No. 3, "	Baxter & Co., Chicago	90 00
	29.	3, No. 3, "	Haltman, St. Louis	300 00
July	12.	2, No. 3, "	Baxter & Co., Chicago	180 00
	13.	2, No. 2, "	Todd & Co., St. Louis	140 00

	21.	1, No. 2, Z. Z.,	Turner & Pettett, Akron, O	100 00
	27.	1, No. 4, "	Todd & Co., St. Louis	150 00
454	Aug. 2.	2, No. 3, Z. Z.,	Baxter & Co., Chicago	180 00
	4.	2, No. 3, "	Todd & Co., St. Louis	180 00
		2, No. 2, "	Halteman, "	150 00
	9.	2, No. 3, "	Baxter & Co., Chicago	180 00
	15.	2, No. 2, "	Todd & Co., St. Louis	140 00
	29.	1, No. 2, "	Baxter & Co., Chicago	70 00
Sept.	6.	1, No. 2, "	Herold & Motz, Akron, O	100 00
	10.	3, No. 3, "	Halteman, St. Louis	300 00
	10.	3, No. 3, "	Todd & Co	270 00
	28.	2, No. 3, "	H. Harvey & Sons, Clev'd, O	260 00
	29.	1, No. 3, "	Todd & Co., Saint Louis	90 00
		1, No. 3, "	Halteman "	100 00
Oct.	2.	2, No. 3, "	Baxter & Co., Chicago	180 00
		1, No. 2, "	" "	70 00
	13.	2, No. 3, "	Todd & Co., St. Louis	180 00
	15.	2, No. 3, "	Halteman	200 00
		1, No. 3, "	Harveys, Cleve'd, O	130 00
	22.	1, No. 3, "	Baxter & Co., Chicago	90 00
	24.	3, No. 2, "	" "	210 00
	30.	2, No. 2, "	Halteman, St. Louis	150 00
		1, No. 2, "	Todd & Co., "	70 00
Nov.	22.	2, No. 3, "	Baxter & Co., Chicago	180 00
	23.	2, No. 3, "	Todd & Co., St. Louis	180 00
		2, No. 3, "	Halteman, "	200 00
Dec.	3.	2, No. 2, "	" "	150 00
	4.	4, No. 2, "	Baxter & Co., Chicago	280 00
	12.	1, No. 3, "	Todd & Co., St. Louis	90 00
	23.	3, No. 3, "	Halteman, "	300 00
1867.				
Jan.	7.	2, No. 2, "	Baxter & Co., Chicago	140 00
		2, No. 3, "	" " "	180 00
	Feb. 2.	3, No. 2, "	Todd & Co., St. Louis	210 00
455	Feb. 9.	4, No. 2, Z. Z.,	Baxter & Co., Chicago	280 00
		4, No. 3, "	Halteman, St. Louis	400 00
M'ch	9.	1, No. 4, "	Allen & Co., Akron, O	200 00
	21.	1, No. 2, "	D. Laird & Co., Canton	100 00
May	1.	1, No. 4, "	Barrow, Dodge & Co., book don't tell	200 00
	18.	4, No. 3, "	Halteman, St. Louis	400 00
	27.	2, No. 2, "	Todd & Co	140 00
June	25.	3, No. 3, "	Baxter & Co., Chicago	270 00
	2.	No. 2, "	" "	140 00
July	17.	2, No. 3, "	Todd & Co., St. Louis	180 00
	22.	3, No. 3, "	" "	270 00
	26.	2, No. 3, "	Halteman, "	200 00
Aug.	13.	3, No. 3, "	Henry Riehl, "	300 00
		3, No. 2, "	Baxter & Co., Chicago	200 00
	17.	2, No. 3, "	Todd & Co., St. Louis	180 00
	24.	2, No. 2, "	" "	140 00
Sept.	2.	1, No. 4, "	Baxter & Co., Chicago	150 00
	13.	2, No. 4, "	Todd & Co., St. Louis	300 00
	17.	2, No. 2, "	" "	140 00
	21.	2, No. 3, "	Baxter & Co., Chicago	180 00
Oct.	19.	1, No. 2, "	" "	70 00

		1, No. 3, Z. Z.,	Baxter & Co.,	Chicago		90 00
Nov.	2.	1, No. 4, "	"	"		150 00
	8.	2, No. 2, "	"	"		140 00
	11.	2, No. 2, "	Todd & Co.,	St. Louis		140 00
		2, No. 2, "	Baxter & Co.,	Chicago		140 00
Dec.		2, No. 2, "	"	"		140 00
	19.	2, No. 3, "	"	"		180 00
1868.						
Jan.	6.	3, No. 2, "	"	"		210 00
Feb.	21.	2, No. 2, "	"	"		140 00
		4, No. 3, "	Todd & Co.,	St. Louis		280 00
456	Feb. 21.	4, No. 3, Z. Z.,	Todd & Co.,	St. Louis		360 00
	M'ch 4.	2, No. 3, "	Haltman,	"		180 00
	4.	2, No. 3, "	Baxter & Co.,	Chicago		180 00
	30.	2, No. 4, "	C. W. Coe & Co.,	Cleveland		400 00
Apr.	17.	2, No. 2, "	Haltman,	St. Louis		140 00
		2, No. 3, "	"	"		180 00
	18.	1, No. 4, "	Baxter & Co.,	Chicago		150 00
May	6.	1, No. 4, "	Warwick & Barksdale, Gallego Mills,	Richmond, Va		200 00
	13.	4, No. 2, "	Baxter & Co., 66.50,	Chicago		266 00
	26.	2, No. 2, "	"	"		133 00
		3, No. 3, "	" 85.50	"		256 00
Jun.	9.	2, No. 2, "	"	"		140 00
		3, No. 3, "	"	"		270 00
	17.	2, No. 2, "	"	"		133 00
July	3.	1, No. 2, "	J. L. Miller,	Ghent, O		100 00
	9.	4, No. 2, "	Todd & Co.,	St. Louis		280 00
		4, No. 3, "	"	"		360 00
		1, No. 3, "	J. H. Spaulding,	Huntsville		100 00
	31.	3, No. 3, "	Baxter & Co			256 00
Aug.	10.	4, No. 2, "	Todd & Co			280 00
		4, No. 3, "	"			360 00
		2, No. 2, "	Halteman			140 00
	17.	1, No. 2, "	Todd & Co			70 00
		2, No. 3, "	Halteman			180 00
	22.	3, No. 3, "	Baxter & Co			256 00
Aug.	31.	2, No. 2, "	Baxter & Co.,	Chicago		133 00
Sept.	2.	3, No. 2, "	"	"		199 50
	5.	1, No. 2, "	Todd & Co.,	St. Louis		70 00
	8.	1, No. 3, "	Halteman,	"		90 00
	10.	1, No. 4, "	Baxter & Co.,	Chicago		150 00
	17.	1, No. 2, "	Pritz & Weinshimer,	Allentown, Pa		100 00
457	Sept. 17.	3, No. 2, Z. Z.,	Baxter & Co.,	Chicago		199 50
	25.	1, No. 3, "	S. S. Thompson, book don't tell			120 00
Oct.	3.	2, No. 3, "	Halteman,	St. Louis		180 00
		1, No. 3, "	G. B. Turner,	Baltimore		90 00
	19.	2, No. 2, "	Halteman,	St. Louis		140 00
		2, No. 2, "	Baxter & Co.,	Chicago		133 00
	30.	2, No. 2, "	"	"		133 00
Nov.	10.	4, No. 2, "	"	"		266 00
1869.						
Jan.	8.	3, No. 2, "	"	"		199 50
Feb.	1.	5, No. 2, "	"	"		332 50
		3, No. 3, "	"	"		256 50

	6.	3, No. 3,	Z. Z.,	Todd & Co., St. Louis	270 00
		6, No. 2,	"	" "	420 00
	18.	3, No. 3,	"	" "	270 00
M'ch	6.	1, No. 2,	"	G. B. Turner, Baltimore	60 00
Apr.	5.	1, No. 2,	"	J. S. Plumly, Des Moines, Iowa	80 00
	15.	2, No. 3,	"	G. B. Turner, Baltimore	156 00
May	5.	2, No. 3,	"	" "	156 00
	6.	1, No. 3,	"	" "	78 00
	8.	1, No. 4,	"	Baxter & Co., Chicago	150 00
Jun.	19.	3, No. 2,	"	" "	199 50
	24.	3, No. 2,	"	" "	199 50
July	22.	1, No. 2,	"	J. S. Plumly, Des Moines, Iowa	80 00
	24.	3, No. 2,	"	Baxter & Co., 65	195 00
Aug.	27.	1, No. 2,	"	King Bros. & Bradford, Ravenna, O.	100 00
Sept.	30.	4, No. 2,	"	Baxter & Co., Chicago	260 00
Oct.	19.	4, No. 3,	"	Todd & Co., St. Louis	340 00
		2, No. 2,	"	" "	130 00
1870.					
Feb.	17.	1, No. 3,	"	G. W. Cunningham, Tiffin, O	120 00
M'ch	6.	1, No. 2,	"	Nordyke & Co., Richmond, Ind	66 50
	Apr.	4. 2, No. 3,	"	Todd & Co., St. Louis	168 00
458	1870.				
	May	14. 1, No. 4,	Z. Z.,	Gallego Mills, Richmond, Va.	180 00
June	2.	1, No. 2,	"	" " "	85 50
	7.	3, No. 2,	"	Todd & Co., St. Louis	285 00
	13.	1, No. 3,	"	J. L. Roberts, Greenfield Mills, Frederick Co., Ind	120 00
	20.	1, No. 2,	"	B. E. Bailes, Huntsville, Ala	76 00
July	13.	2, No. 2,	"	Plumley, Des Moines, Iowa	152 00
Aug.	11.	2, No. 3,	"	Todd & Co., St. Louis	168 00
	16.	1, No. 3,	"	Ezra Valentine, Baltimore, Md	96 00
Sept.	1.	3, No. 2,	"	Baxter & Co., Chicago	199 50
		3, No. 3,	"	" "	252 00
	12.	1, No. 2,	"	" "	66 50
Oct.	5.	2, No. 3,	"	Ezra Valentine, Baltimore	192 00
	13.	2, No. 2,	"	Baxter & Co., Chicago	133 00
	17.	2, No. 2,	"	Todd & Co., St. Louis	133 00
		2, No. 2,	"	Baxter & Co., Chicago	133 00
	27.	2, No. 3,	"	Nordyke & Co., Richmond, Ind	133 00
Nov.	4.	1, 3,	"	Todd & Co., St. Louis	84 00
	17.	1, No. 2,	"	B. & M. Davis, Minerva, O	95 00
Dec.	1.	1, No. 2,	"	Nordyke & Co., Richmond, Ind	66 50
	9.	1, No. 4,	"	D. Bush, Richmond, Ind., on hand	200 00
	19.	1, No. 3,	"	Sam'l Taggert, Indianapolis, Ind	90 00
		1, No. 4,	"	H. M. Sinclair, Bellevue, O	200 00
	21.	1, No. 3,	"	J. H. Shaup, Burbank, O	96 00
1871.					
Jan.	9.	2, No. 2,	"	Todd & Co., St. Louis	133 00
M'ch	1.	1, No. 2,	"	Herbert & Wright, Louisville, Ky., on hand	76 00
		1, No. 2,	"	C. A. Genup & Co., Dayton, O	76 00
April	5.	1, No. 2,	"	McKaskle & Co., Knoxville, Tenn	71 25
		1, No. 2,	"	Ruble & Hight, Chatanooga, Tenn	71 25
		1, No. 2,	"	J. J. Cohen, Rome, Ga	71 25
		1, No. 2,	"	Thomas & Stewart, Atlanta, Ga	71 25

2, No. 2, Z. Z., Todd & Co., St. Louis		133 00
1, No. 2, " Nordyke, Mannon & Co		66 50
412		35,160 00

459 *Defendant's account.*

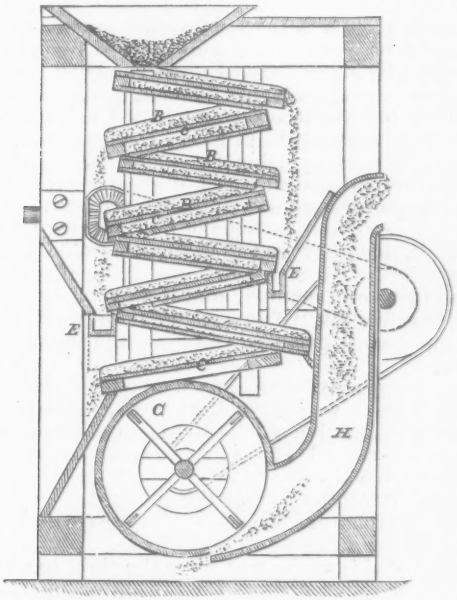
412		35,160 50

Machines on hand unsold.

1, No. 4	150	
6, No. 3	521 50	
10, No. 2	693	
		1,364 50
		33,796 00

From an examination of our books we are of the opinion that the No. 2 machine cost each 45 00
No. 3 cost " 60 00
No. 4 " " 100 00

25484.



J. L. Booth's Patent Grain Separator.

The first successful oat extractor ever constructed. This cut is taken from Patent Office Reports for 1859, page 517 of the Illustrations.

ROCHESTER, N. Y., *July 5th*, 1871.

J. F. TOLLE, Esq.,

DEAR SIR: I hereby call your attention to the fact that you are now or have been using a machine or machines called Vaughn's Zig-zag Separator or St. Louis Zig-zag (if this is not true you will please correct me, as I would not falsely so charge you), which is a direct infringement on my grain separator, which was patented to me by a reissued patent, bearing date November 29th, 1864, No. 1226, the claims of which read as follows, to wit:

What I claim is the combination of the zig zag screens and boxes B C, when the same have a lateral shake motion, or one at right angles to the passage of the grain, in such a manner as to have the grain pass consecutively over and through them, and arranged relatively with each other to operate substantially as and for the purpose herein set forth.

Second claim. I also claim the series of zig-zag screens and boxes B C, with or without the troughs E, and having a lateral shake motion, in connection with the fan G and spout H, substantially as herein set forth.

J. L. BOOTH,
Patentee.

Witnesses:
R. J. OSGOOD.
J. L. JUDSON.

The above are the claims upon which the suit is predicated.

You will please give early attention to this matter and negotiate a settlement, as I must be paid a sum sufficient to remunerate me, and that amount is fixed by me and based upon the legal circumstances in your case. If we should differ in the amount, or on the question of my rights, I stand ready to have it adjusted by the United States courts.

I have no other course pointed out to me than to recover from either the maker, vender, or persons using the machine. Where the former are worthless there is no good prospect of recovery if judgment is obtained against them, and we are not willing to prosecute expensive lawsuits for damages unless there be hope of final recovery.

I wish, first of all, to satisfy you that you are liable to me under the infringement law, and I shall give you herewith, or if requested, all the information I can in a brief manner, and it may be somewhat interesting to you if not perfectly satisfactory. For the proof of my position, so far as the patent record gives it, you have the same means of reference that I have.

All I seek to recover is my just claims in damages; and which in your case, to this date, if paid without suit or costs, is for royalty on No. 3 machine, one hundred and five ($105); interest on the above five years, thirty-one dollars and fifty cents ($31.50); total for one No. 3 separator to date, $136.50.

For two machines it will be double this amount.

Deductions for overcharges for size or interest will be made on settlement.

460 On receipt of this notice you have the right to abandon the use of the machine referred to as the infringing machine, if you are now using the same, and stay further additional charges, for the continued use which I fix at two dollars per week after the first week, until the whole amount with interest is paid me. If not now using the same, but still liable for past use since 1864, the interest only will be added to the original claim for damages. The original claim is what I

have heretofore charged and established as profits, or, in other words, royalties prepaid at the time of the purchase of the machine by the party making use of it in any manner, and not at all established by the terms or figures of any infringing party, who may have manufactured and sold, or bought and sold from any unauthorized vender or maker.

Two sizes have been made and sold by me (mainly), the No. 3, sold with right of use for $150; cost to get manufactured, $45; profit or royalty prepaid, $105. Next size, No. 2, $135; cost do., $40; profit or royalty, $95. Having established these rates I ask no more of you than what you would have paid me at the time of purchase, had you bought of me, unless I am obliged to sue, then it will be three times this amount, adding the interest and other additional charges for continued use after notice, as herein provided.

This position as to the amount to be paid me I have in a similar case established in a suit at Detroit, on an infringement of my grain separator, patented April 8, 1851, and reissued November 18, 1862, tried by Justice Swaine in November, 1864.

As my patent antedates all others using zigzag sieves, you can place such confidence in my reports and exhibits as you deem best. I have no compromise to make. I resort to that means only which the Congress of the United States has given me, and acting under this rule I feel that I am acting fairly, justly, and wisely.

Not hearing from you, or learning in any manner that you prefer to meet this matter in the same spirit, promptness, and candor which I have here attempted to set the facts before you, I shall order suit commenced in your district, a defence of which will cost you five times the amount of my demand. I do not throw this out as a threat to intimidate you; for I offer to give you all the defence possible, and the benefit of all the facts going to your possible benefit in any defence, for I have them all before me, and you can have them by the asking. If you wish to defend I shall not object, and shall meet you on terms of perfect friendship; in fact I would advise you to defend it if you have a good legal defence, and will give you this advice which I know to be good from experience; and that is, do not employ any lawyer who does not fully understand patent law, or that has not had experience in patent suits, for all such will, if they take your case, only lead you into trouble; in fact, no lawyer of good and fair dealing will take up a patent case who has not had experience, or read up the patent laws and practice, for it is more generally a special practice.

After the suit is commenced judgment will be taken for the amount of my claim and costs, unless you defend it, and the amount will be three times the amount herein set down as an original claim, had it been paid without expenses to me.

After payment by you of the within damages, as conditionally set forth, you have the right to continue the use of the machine without further charges.

Ex. circular 2, 72.—Booth's dep.

Decisions in patent cases in the United States courts.

The "actual damages" sustained include all necessary and proper expenses in protecting one's violated rights. Though they should not include the "smart money," they may well embrace everything really suffered by the wrong. (Allen v. Blunt, 2 Wood and Min., 146, 147, Woodbury, J., Mass.)

65. And the plaintiff will also be entitled to interest on the actual damages as found by the jury, from the commencement of the suit. (McCormick v. Seymour, 2 Blatchf., 259, Nelson, J., N. Y., June, 1851.)

66. In an action for an infringement of a patent, the rule is to give the actual damage or loss incurred by reason of the infringement, and that is the profits which the plaintiffs would have made if they had not been embarrassed by the interference of the defendants, because the law presumes that the plaintiffs would have had the patronage diverted by the defendants. (Tatham v. Le Roy, 2 Blatchf., 494; Nelson, J., N. Y., 1852.)

67. The profits which the plaintiffs have lost in consequence of the infringement affords, therefore, a criterion by which to determine the amount of damages they have sustained. (Ibid., 494.)

68. The jury also, in estimating the damages, may take into account the interest on the damages from the time sustained, if they choose, and give it by way of damages. (Ibid., 494.)

70. The patent act of 1790, § 4, made an infringer liable to pay such damages as the jury should find, and also forfeit the machine. The act of 1793, § 5, declared that an infringer should pay a sum equal to three times the price for which the patentee had sold licenses. The act of 1800, § 3, provided that an infringer should pay three times the actual damages sustained. (Seymour v. McCormick, 16 How., 488; Grier, J., sup. court, 1853.)

82. The fact of the use of a patented machine is evidence of utility, and should subject the party using to damages. (Simpson v. Mad River R. R., 6 McLean, 604; McLean, J., Ohio, 1855.)

9. It is not necessary that two things should be identical in order to make one an infringement of the other. The true question is, are they substantially the same, though not in every minute particular? (Alden v. Dewey, 1 Story, 339; Story, J., Mass., 1840.)

4. Mere colorable differences or slight improvements cannot shake the right of an original inventor, or protect an infringer. (Ibid., 54.)

3. In an action for infringement the jury may allow the plaintiff in damages his actual costs, which include reasonable counsel fees as well as any taxable costs he had paid in consequence of the violation of defendant. (Allen v. Blunt, 2 Wood & Min., 146; Woodbury, J., Mass., 1846.)

14. The question of infringement is one irrespective of motive. The defendant may have infringed without intending or even knowing it; but he is not on that account the less the infringer. (Parker v. Hulme, 7 West; Law Journal, 426; Kane, J., Pa., 1849.)

P. S.—Please notice decision No. 66, No. 67, No. 68, No. 70, and No. 14.

J. L. BOOTH,
Rochester, N. Y.

461 The following is believed to be a correct account of receipts and expenses drawn in accordance with J. L. Booth's statement:

Receipts.—J. L. Booth & Co.

SCHEDULE A.

1860.			
May	6.	Blackstone & Manton, Mendota, Ill's, one No. 2 separator, sold Jan'y 17th, 1860, Chi.....	$150 00
"	25.	O. B. Ford's note, 6 mo's., 1 No. 3 sep.....	150 00
"	"	Draft, L. Roberts & Co.....	193 42

PARKS ET AL. VS. BOOTH. 191

June	1.	Nichols & Britts, Mil	80 00
"	"	Hotchkiss & Humphrey, 12 bbl. flour	68 62
July	3.	N. S. Green & Co., 1 No. 3 sep	150 00
"	"	Hotchkiss & Humphrey	38 14
"	"	Berchy & Kern, Mil	150 00
"	"	Amos Sawyer	50 00
	18.	L. Enos & Co	271 32
Aug.	15.	Cash of C. E. Graff, Mil	236 13
"	26.	H. J. Perrin	100 00
"	28.	Nichols & Britts, Mil	92 82
Sept.	7.	Draft, Hotchkiss & Humphrey, Mil	37 62
	11.	E. Berry & Co., 1 No. 3 (draft)	149 15
	13.	D. S. Cunkle	125 00
	28.	G. M. Cropsey	99 50
Oct.	27.	Wm. F. Noyes, Chi	100 00
Nov.	28.	C. E. Graff, Mil	33 00
Dec.	1.	Wm. F. Noye	30 00
	8.	Neil, Stewart & Co.	85 00
	"	Chamberlin & Thompson	135 00
			2,524 72
1860.			
Dec.	8.	G. M. Cropsey	99 75
	10.	Merrill & Cressey	89 55
	22.	C. E. Graff, Mil	31 50
	28.	G. M. Cropsey	25 00
1861.			
Jan'y	5.	Marine Bank, Chi., col. note	136 04
	9.	Notes from Noye & disc't at Powers	342 47
	17.	Wm. F. Noye	150 10
	25.	Nichols & Britts, note	80 00
	"	Avails of Robin's note	114 44
Feb.	4.	Excess freight	7 00
	5.	Wm. F. Noye	200 00
	"	De Berard	39 00
	28.	C. E. Graff	62 00
Mar.	2.	Sold handmill	40 00
	8.	Larabee	108 00
	"	E. Heller	20 00
Mar.	8.	Wm. F. Noye	160 00
	28.	E. C. Graff	44 75
Ap'l	14.	Johnson	100 00
	"	Purdy	50 00
462	24.	Notes collected	214 00
	May 19.	C. E. Graff & Lower	161 00
	"	Deement & Co	95 00
	"	Heller's note, p'd	44 40
June	3.	Tyler's note	75 00
	5.	C. E. Graff, draft	850 68
			5,064 30
1861.			
June	22.	Schoolcraft & Co	200 00
	28.	Mygatt & Co	105 00
	"	C. Albert & Co	95 00
	29.	B. Adams	123 82

Aug.	1.	C. E. Graff	3 23
	"	Wm. F. Noyes	70 00
	30.	Kerchey & Kern	78 00
Sept.	13.	Zinc sold in Boston	8 88
	25.	G. Garbut	48 00
Oct.	12.	C. E. Graff	40 00
	13.	" " "	77 50
Nov.	24.	Sherman	100 00
Dec.	16.	Darwin & Carhart	100 00
"	23.	Moon & McClann	96 00
1862.			
Jan'y	1.	Note of Slausen	100 00
	28.	Wm. F. Noye	188 00
April	10.	Eddy, Stewart & Ludlow	165 00
July	15.	Carroll & Co	116 50
	31.	C. Derwent & Co. (S. C. Troy)	125 00
Aug.	5.	I. Fargusson	104 48
Sept.	1.	Peter Clayton & Co	105 00
	"	Wm. F. Noye	150 00
	"	J. B. Enos & Co	200 00
	18.	G. W. Burleigh (N. H. Great Falls)	85 00
Oct.	1.	C. R. Daves	55 00
	"	Wm. F. Noye	70 00
1863.			
March	27.	I. Fargusson (Dubuque, Iowa)	50 00
			$7,723 71
1863.			
June	26.	I. Fargusson (Dubuque, Iowa)	79 58
July	26.	" "	50 00
Oct.	15.	Lord & Dewey	48 95
to 1866.			
Received from various sources from balance of machines made by D. Gatens & Co. (about)			250 00
Total receipts			$8,152 24

Expenses.

1860.			
May	6.	To building separators, smaller sizes, for Western mills, No. 2 & 3	368 50
		Expenses west to Chicago and introducing machines (gone 2 months)	345 81
		Discounts 9.45, drayage, stereotypes	10 57
463	May 8.	Stamps	50
	"	Cartage	50
	14.	Telegram	1 30
	"	New York	1 69
	19.	Printing	6 00
	23.	Stamps	1 00
	25.	Drayage	61
		Drayage & freight on sep., Medburg & Hoyt, Mil	6 58
			743 06

1860.			
June	1.	Freight on 2 sep's to Milwaukee, Nichols & Bretts	8 38
	5.	Trip to Blackrock	4 91
	"	Mix & Co., for engraving	14 91
	6.	Expenses on sep. sent to Buffalo	1 00
	9.	Gatens & Co. for building sep. (on account)	50 00
	11.	Discount & freights	1 38
	16.	Gatens & Co. on account of sep	220 00
	18.	Tel. & stamps	2 00
	25.	Expenses to Oswego, separator business	22 91
	26.	Printing, 1.25; wheat for experiment, 2.01	3 26
July	3.	Paid Joseph Hall for separators	150 00
	"	Daniel Gatens & Co. (on account sep's)	60 00
	12.	Expenses to New York, fees lent to Noye & trip to Waterford	42 25
	13.	Stamps	30
	18.	Envelopes	24
	20.	Expenses to Lockport, N. Y	5 50
	24.	Hotel & tel	1 76
	28.	Stamps	25
Aug.	1.	Daniel Gatens & Co. for sep. (on acc't)	540 00
	"	Cloth & stamps	1 20
	11.	Expenses Oswego & Watertown	28 19
	14.	Stamps, 50 c'ts; Richardson's mill, 1.25	1 75
	18.	Paid note Flour City Bank, first given to D. Gaten & Co. for sep., but not charged up as disbursements until paid	227 89
	26.	Stamps	1 00
			2,132 20
1860.			
Aug.	28.	D. Gatens & Co. (cash)	100 00
	29.	" " " " " on account	70 00
	29.	Paid note Flour City Bank	100 00
Sept.	1.	Expenses collecting draft	1 43
	"	Envelopes	25
	14.	Stamps	30
	16.	Charges on wheat for experiments	1 05
	28.	Rent of storage-room, boxing sep., &c	4 24
	"	Postage, protest, & horse hire	3 00
Oct.	5.	Humphrey, att'y	4 00
	13.	Jones, cartage	15 00
	"	Angle for punching zinc	7 95
464	Oct. 22.	D. Gatens & Co., cash	40 00
	23.	Expenses Janesville, Wis., printing, exp's Chic	26 90
	29.	A. E. Walcott, att'y, Chic'o, fees	10 00
		Costs	4 12
		Goodwin, Larned & Goodwin, as retain'g	50 00
		Sundries for separators	1 00
	30.	Expenses return from Janesville & Chic'o, costs, hotel, &c	39 16
	31.	Freight bill	4 11
Nov.	1.	Crank	1 06
	3.	Sign, &c	2 75
	7.	Drayage & freight	17 94

	10.	Sundries, belting 32½ feet, leather, &c	11 38
	14.	Map, stamps, exp. to Edgerton, Wis., &	4 47
	14.	Freight, drayage, turning shaft, &c	5 17
			$2,657 48
1860.			
Nov.	16.	Fare to Monroe, Wis., freight, &c	3 82
	19.	Hotel bill, file, fare, & drayage	3 11
	21.	Irons, advertisements	5 75
	23.	Fare to Racine, Wis., Wilton, & Mil	24 20
	26.	Expenses in Mil., fare to Chic'o	6 27
	27.	Omnibus, drayage, & belt	1 00
Dec.	2.	Board bill, Chic'o	3 00
	"	Fare to Rochester from Racine, Wis., &c	21 70
	4.	Stamps	59
	8.	Fare to New York, 2.50; note paid, $90.00; D. Gatens & Co., $135.00	227 50
	10.	D. Gatens & Co. on account, cash	141 55
	"	D. Gatens & Co	1 00
	11.	Hill	3 50
		Stationery	50
		Sent Noye, cash (returned)	31 00
	14.	Printing	3 50
	22.	Expenses to Stockton	12 00
	28.	Gatens & Co	25 00
1861.			
Jan'y	5.	Paid note at Mechanics' Bank	86 00
	9.	" " to D. A. Powers	341 47
	14.	Larned & Goodwin, Chic'o on ret'g	50 00
	17.	Freight	5 35
	25.	Hill & Gould, notes Mechanics' B'k	487 94
	"	D. W. Powers' b'king house, notes	600 08
	26.	Joleur Seitze & Hines, machinery	3 50
	29.	Stamps	75
1861.			
Feb.	4.	Collecting	1 25
			4,948 61
	5.	D. Gatens & Co	32 68
		Larned & Goodwin, att'ys, Chic'o	25 00
	10.	D. Gatens & Co	75 00
	12.	Note paid	85 4[illegible]
	14.	Model	1 00
Mar.	8.	Draft	7 50
465	Mar. 18.	Larned & Goodwin, att'ys	18 00
		Board bill, Chic'o, $10.00; zinc, .50; rubber, 1.35; stamps, &c	13 75
	22.	D. Gatens & Co	40 00
	28.	Expenses (see mem. book)	19 00
		Paid Gatens' note	45 00
Ap'l	14.	Note given to D. Gatens on acc't	250 00
	24.	Expenses, trip to Chic'o, &c	71 39
	"	Commercial Bank on note	139 34
	"	Freight bill	19 46
	"	P. o. & stationery	5 73
May	12.	Stamps	50

	15.	Note paid at D. W. Powers'	145 00
	"	Telegram	80
	19.	Note p'd at D. W. Powers'	109 50
	"	Geo. Iago, mechanic, labor	1 00
	21.	Expenses to St. Catharine, C'a	5 70
	30.	Stamps	1 00
June	6.	Printing	5 00
	"	Expense to Haney's Falls	4 00
	13.	D. Gatens & Co	14 48
		Paper	25
			5,884 12
	"	Freight on sep	3 27
	"	D. Gatens & Co	5 00
	22.	Paid note (Angle)	200 00
		Express charges	62
	28.	James Terry & Co	26 63
	"	Stamps	1 00
	29.	Traders Bank (note paid)	100 00
		Horse hire	1 84
July	1.	P. office	45
	18.	Stamps	1 00
Aug.	1.	Expenses, trip to Chicago	54 50
	11.	Stamps	1 00
	30.	D. W. Powers (on note)	20 00
Sept.	7.	Expenses to Buffalo	3 12
	"	Stationery	45
Oct.	8.	Livery	1 38
	13.	Stamps	2 02
	"	Stamps	35
Dec.	16.	Livery	3 40
	23.	Paid note Traders Bank	96 00
1862.			
Jan'y	20.	Lawsuit	4 65
	22.	Envelopes & paper	2 00
	28.	Larned & Goodwin, att'ys, Chic'o	188 00
Feb'y	8.	Paid notes to Traders Bank & Lutes	219 50
March	12.	Legal expenses	80 00
	"	Amsden insurance on machines	21 00
466	"	Note paid Rochester Bank	100 00
			7,021 30
	12.	Note paid Smith & Perkins	61 40
	"	John Lutes' balance on note	14 33
	26.	Stationery	2 00
April	10.	Expenses handling seps	1 02
July	5.	Expenses to Waterford, box, mach's, discount	47 63
July	15.	John Lutes on note	43 00
	"	John Lutes " "	27 00
	"	Jones' bill	10 20
Aug.	5.	John Lutes bal. on note	35 49
"	"	Painter	4 35
	"	Butts on note	54 00
	"	Expenses, trip to Canada	28 05
	16.	Paid note at Ward Bro's, 100.00; sundries, 15.73	115 73
Sept.	1.	" " " Wards	200 00

Oct.	10.	Expenses, see memo. (duties & express)	2 57
	"	Paid Brands (note)	53 38
D'c'r	1.	John Lutes (on another note)	92 00
1863.			
March	27.	Protest	1 85
July	6.	Fowler order	10 00
Oct.	31.	John Lutes on note, 45.00; bill work 1.50	46 60
1865.			
July	21.	Paid James A. Cowles, Chicago, Ills., fees on retainer, &c., in suit against Baxter, 100.00; expenses trip, 50.00	150 00
		Costs paid since on same case	13 50
		Model for suit on trial	30 00
		W. F. Cogswell, principal att'y	50 00
		Total expense	8,115 30

467 The U. S. Patent Office to all persons to whom these presents shall come, greeting :

This is to certify that the annexed is a true copy from the records and files of this office of the letters patent granted Jas. A. Vaughn, dated April 24th, 1860, No. 28026, for "Imp't in Grain Seperators," and the correspondence in the matter of the application for same.

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be herewith affixed this eighth day of February, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-fifth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

No. 28026. The United States of America.

To all to whom these letters patent shall come :

Whereas James A. Vaughn, of Cuyahoga Falls, Ohio, has alleged that he has invented a new and useful improvement in grain separators, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and pre-
468 sented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said James A. Vaughn, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-fourth day of April, one thousand eight hundred and sixty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said James A. Vaughn, in the schedule hereunto annexed and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington, this twenty-fourth

day of April, in the year of our Lord one thousand eight hundred and sixty, and of the United States of America the eighty-fourth.

JACOB THOMPSON,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.]

T. SHUGERT,
Act'g Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, James A. Vaughn, of Cuyahoga Falls, in the county of Summit and State of Ohio, have invented certain new and useful improvements in grain separators, and I do hereby declare that the following a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings in which—

Fig. 1 represents a longitudinal vertical section through said grain-cleansing machine.

Fig. represents a vertical cross section through the same.

My invention consists in the manner in which I have arranged my zig-zag screens and inclined boards, with regard to the side chambers into which the coarser impurities are carried, and the exit therefrom and the inclined cockle board, and its delivery, as will be explained.

To *make* others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the frame of the machine; within this frame is hung the frame B, which is supported by two elastic rods, C, which at their lower ends are secured to the frame A; the frame B is vibrated by the action of the cam D, on the shaft E, the elastic rods C pressing it towards said cam; E, G, H, I, J, K, L, and M represent a number of inclined or zig-zag screens, and N, O, P, Q, R, S, a number of inclined boards which are secured within the frame B, and which incline towards the sides of the machine, as represented in Fig. 2; T represents another inclined board, and U a screen, which are also secured to the vibrating frame B, and which incline respectively towards the end of the machine.

The operation of the machine is as follows: The grain to be acted upon is fed down on the screen F, through the aperture *a;* the holes of this screen are somewhat larger than , and a part of the coarser impurities passes together with the grain through them down on the inclined plate N, while the balance passes over its lower edge down into the space V; the grain then, by the vibration of the frame B, passes down on the plate N, and thence on the screen G, the holes of which are just sufficiently large to permit the passage of the grain through them, which together with the finer impurities passes down on the plate O, while that which remains on the screen G, passes over its lower end, and down into the chamber W; thus the operation continues, the coarser impurities which cannot pass through the holes of the screens F, G, H, I, J, K, L, M, being constructively discharged at both sides of the frame B, into the chambers V W, and it will be seen that each of the inclined plates N, O, P, Q, R, S, discharges the grain on to the upper part of the next consecutive screen, thereby causing it to pass over the entire surface of said screens; the coarser impurities which are collected in the

chambers V and W, slide down their inclined bottoms *b*, shown
471 in dotted lines, in Fig. 1, and are discharged from the machine at L.

The grain and smaller impurities as they pass through the screen M, drop down on the inclined board T, and are thence discharged on the upper part of the screen U, the perforations of which are so small as not to permit any grain to pass through them, while the cockle, small seeds, and other small impurities, pass through them and drop down on the inclined cockle board Z, by which they are discharged from the machine.

The grain passes over the lower end of the screen U, down into the blast trunk *h*, where it meets the blast of the fan *k*, which drives the dust and other light impurities up through the trunk *h*, the heavier parts of which escape thro' the passage *m*, and the lighter ones through the passage O, while the grain escapes through the passage *p*. By this construction and arrangement the impurities are mainly brought out of the machine at one end of it, whilst the cleaned grain comes out at the opposite end, as shown by Fig. 1, the impurities coming out on the left, the grain on the right side.

The particular manner, too, in which I incline my zigzag screens, viz, across the machine, admits of their being more easily cleaned, as the attendant, from the end of the machine, with a brush can clean every screen of the straw, chaff, &c., which accumulates in them, the whole end being open; my zigzag screens incline in a direction exactly the
472 reverse of the grain sieve U, and of the cockle board Z, and their arrangement thus differs from the zigzag screens. I have shown six sets of zigzag screens and boards underneath them; of course, less or more than six may be used; a series of three answers a good purpose, but the number may vary with the purpose to which the machine is to be applied.

Having thus fully described the nature of my invention, I would state that I do not claim a series of zigzag screens, as those are well known, but what I do claim therein as new and desire to secure by letters patent is arranging the grain board T, screen U, and cockle board Z, so as to incline in the direction of the length of the machine, while the series of zigzag screens and their boards incline towards the sides of the machines as described, so that while the chaff is delivered at one end of the machine, the cockle and the screenings shall be delivered at the opposite end thereof, substantially as described.

JAMES A. VAUGHN.

Witnesses:
J. EADIE.
C. H. WETMORE.

WASHINGTON, *April 9th*, 1860.

Hon. P. F. THOMAS, *Com'r of Patents:*

SIR: I have to request that the subjoined amendments may be made to the claim of Jas. A. Vaughn for a grain separator. Resp'y, A. B. Stoughton, att'y. Amend Jas. A. Vaughn's specification as follows:

Erase from the word "The" in the 4th to the end of the 13th line
473 of page 4, and insert in lieu thereof as follows:

"Arranging the grain board T, screen U, and cockle board Z, so as to incline in the direction of the length of the machine while the series of zigzag screens and their boards incline towards the sides of the machine, as described, so that while the chaff is delivered at one end of the

machine, the cockle and the screenings shall be delivered at the opposite end thereof, substantially as described."

A. B. STOUGHTON

9 Ap'l, '60.

(Here follows diagram marked page 473.)

474 The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the reissued letters patent granted James A. Vaughn, dated June 11th, 1861, No. 91, for "Imp't in grain separators."

In testimony whereof I, Sam'l A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this fourteenth day of February, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.]

SAM'L A. DUNCAN,
Acting Commissioner.

Reissue No. 91, whole No. 1196.

The United States of America to all to whom these letters patent shall come:

Whereas James A. Vaughn, of Cuyahoga Falls, Ohio, has alleged that he has invented a new and useful improvement in grain separators (for which letters patent were issued to him dated April 24th, 1860, the same surrendered and new letters issued to him dated January 8th, 1861, which last letters having been surrendered by him, the same have been cancelled, and separate letters ordered to issue to him on two amended specifications), which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe *the* he is the original and first inventor or discoverer of said improvement, and that the same hath
475 not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are, therefore, to grant according to law to the said James A. Vaughn, his heirs, administrators, or assigns for the term of fourteen years from the twenty-fourth day of April, one thousand eight hundred and sixty, the full and exclusive right of making, constructing, using, and vending to others to be used the said improvement, a description whereof is given in the words of the said James A. Vaughn in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington, this eleventh day of June, in the year of our Lord one thousand eight hundred and sixty-one, and of the Independence of the United States of America the eighty-fifth.

CALEB B. SMITH,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.] D. P. HOLLOWAY,
Commissioner of Patents.

The schedule referred to in these letters patent, and making part of the same.

To all whom it may concern:

Be it known that I, James A. Vaughn, of Cuyahoga Falls, in the county of Summit, and State of Ohio, have invented certain new
476 and useful improvements in grain separators, and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Fig. 1 represents a perspective view of the grain separator with a portion represented as broken away, to show the parts underneath or behind them.

Fig. 2 represents a longitudinal vertical section through the machine, and

Fig. 3 represents a vertical cross section through the same.

Similar letters, when they occur in the several figures, denote like parts of the machine in all the drawings.

In the separation of wheat from other lighter grains and impurities gathered with it, zigzag screens have been used in connection with a shake motion and a blast, several instances of which may be found in the records of the Patent Office. Boxes have also been connected with shaking screens to catch the grain, such as oats and other material that passes over the screens.

The objection to connecting the boxes with the screens is this, that the boxes become loaded with grain, and as this load has to be shaken with the screens it requires much power, and is a drag upon the motor that operates the screens or machine and impedes their free and
477 easy action. I am aware, too, that a series of zigzag screens and a long fan have been used together as a grain separator. This arrangement is very objectionable, first, because the riddles are difficult of access, liable to become clogged, and must be often cleaned to be at all efficient. And second, as to a long fan, it cannot be made to produce an uniform blast throughout the wind trunk, because the air must be drawn into the fan case at its ends only, and none at the centre, the consequence of which is that there is a sharp blast at the sides of the wind trunk, and comparatively no blast in its central portions. These imperfections make such a grain separator of comparatively little or no practical value, and my object and aim is, and has been, to overcome these objectionable features, which I believe I have done, as I will hereafter explain.

The nature of my invention consists, first, in combining a series of zigzag screens and directing boards that have a shake motion communicated to them with stationary chambers for receiving the material that passes over or falls from them, for the purpose of avoiding the load and drag that is upon such screens when they have the boxes or chambers united with them. And secondly, my invention consists in combining with a series of zigzag screens and directing boards that have a
478 shake motion communicated to them, the stationary receiving chambers and a short fan. And thirdly, my invention consists in the combination of a directing board, cockle riddle, and cockle board, for a purpose which will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the accompanying drawings.

A represents the main frame of the separator, in which I arrange a second frame B, that carries a series of zigzag riddles C, D, E, F, G, H, I, and underneath them respectively a series of directing boards J, K, L, M, N, O. These riddles and directing boards incline across, or the narrow way of the machine, which admits of their being easily got at for the purpose of cleansing from one end, and without being incommoded by the blast trunk, as is the case when arranged lengthwise of the frame, as is above stated.

P is a directing board underneath the series of screens and their boards, which carries the grain that passes through the overlying riddles to the extreme end of what I call the cockle screen Q, that is perforated to allow cockle or impurities of about its size to pass through it onto a cockle board R, which directs it out of the machine, whilst the wheat or other grain from which the cockle has been separated
479 passes into the wind or blast trunk S at *a*, and is acted upon by the blast from the fan T. The fan-case U is arranged across the machine so as to contain a short fan, and is consequently more evenly supplied with air than if arranged lengthwise of the frame, the wind trunk S being narrow, admits of an uniform blast, which a wide or long one would not admit of, for reasons heretofore stated. The light impurities are blown out at *b*, the light grain passes out at *c*, and the heavy wheat at *d*. The oats, sticks, and other impurities that pass over the screens drop into the chambers V V, which are stationary and not connected with the riddles or riddle frame and pass out at *e*, as represented by dotted lines in Fig. 1 at the sides of the machine, and the cockle runs off at *f*, each delivery for each specific separation of the several grains being separate from each other, and the dust separate from the seeds.

W is a shaft, to which the power that operates the machine may be applied. It has upon it a pulley X, over which a belt may pass to drive the fan, said belt passing around a pulley on the fan-shaft for this purpose. On the shaft W there is a cam *g* for vibrating riddle frame B, with its series of screens and boards, said riddle frame being held up against the cam by means of the springs *h*, to which it is connected; the vibration which the riddle frame may receive from a cam with-
480 out producing an actual blow or jarring motion, may be very great or rapid, and is peculiarly adapted to the separation of oats from wheat. It is obvious that oats will readily pass through a screen that wheat will pass through, provided the oat goes point foremost into the perforations, and a jarring motion like that produced by a crank will so turn or jar the oats into the openings in the screen and allow them to go through with the wheat. So much so is this the case, that 200 or 250 vibrations of the screens by a crank is the limit that will admit of the oats passing over without turning and going through the screen, which with a cam motion I can run my screens up to 400 or 450 vibrations per minute, and correspondingly increase the capacity of the machine, as it is of course limited only by the quantity of grain that can be passed over the riddles.

These changes which I have made in this class of machines have given it an importance and value not heretofore known.

The long screens and the long fan and the wide trunk and the shaking grain boxes and the crank motion were all objectionable. I have dispensed with them all, and have made an entirely different reorganiza-

tion, by which an imperfect machine has become one of the most valuable ones connected with the cleaning and separating of grains from the grosser seeds, filth, or impurities that are gathered with or will get mixed with it.

481 The grain is fed into a hopper that stands over the opening *i* in the top of the machine and passes over and through the series of screens and boards, each passage over each screen taking out the oats, sticks, &c., whilst the wheat with some finer impurities passes from directing board to screen and from screen to directing board until the finer impurities pass through the screen Q, and the wheat passes into the blast-trunk, where it is cleaned and further separated from the lighter grains. The heavy wheat, the lighter wheat, the dirt, chaff or filth, the cockle and the oats, all have their separate exits, though all are entered at the same place. The oats and light wheat are not estimated as offal or impurities, as they are valuable, and kept separate. The separation is perfect and expeditious, and the machine easily kept clean. It requires but little power to run it, is cheap, durable, and very efficient.

Having thus fully described the nature and object of my invention, what I claim therein as new and desire to secure by letters patent is, first, in combination with a series of zigzag screens or riddles, and a series of directing boards having a shake-motion, the stationary receiving chambers for receiving the material from the screens, substantially as herein described.

I also claim the combination of the series of zigzag screens and directing boards having a shake-motion, the stationary receiving chambers and short fan, when arranged to operate substantially, as herein described.

JAMES A. VAUGHN.

Witnesses:
P. G. SOMERS.
CHAS. HUNT.

482 (Here follows diagram marked page 482.)

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office.

In testimony whereof I, D. M. Leggett, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-fourth day of September, in the year of our Lord one thousand eight hundred and seventy-three, and of the Independence of the United States the ninety-eighth.

[SEAL.] M. D. LEGGETT,
Commissioner.

In reapplication for extension of patent dated Sept. 20th, 1859, reissued Sept. 25, 1860, and Nov. 29, 1864, No. 1826, granted to Jonathan L. Booth, for "imp't in grain separators."

Examiner's report.

Hon. M. D. LEGGETT,
Com'r of Patents:

SIR: In the matter above named I have the honor to submit the following report:

The object of this invention was to produce a grain separator which would effectually separate wheat, oats, and cockle.

App't has evidently long been experimenting in this direction, as his first patent was granted in 1851. In his statement he tells very succinctly of the practical difficulties that he found to be overcome, and how the experience gained in introducing the machine patented in 1851 led him to experimenting, and finally to the invention of the ma-
483 chine covered by the patent sought to be extended.

App't found that if he passed the mingled wheat and oats over a short sieve having perforations calculated to allow the berries of wheat to easily pass there through the sieves, receiving a rapid jarring motion meanwhile, in a direction at right angles to that of the passage of the grain, that the large percentage of the oats would slide over the perforations and off the tail of the sieve; and, further, if he arranged a series of such sieves (say 4 or 6 or more) in such relation to each other that what grain passed through one was immediately fed to the head of the next, that a total, or almost total, separation of the wheat and oats would be effected.

His invention consisted in embodying these principals in a practical machine.

Examination shows that he was the 1st to construct a cleaner on this principle.

Before his time sieves had been used having round perforations, but of such length that the larger part of the oats (as shown by the testimony) that had passed successfully over the perforations in the upper part of the sieve would drop through those in the lower end. So far as the office records show, he was the first to obtain the necessary length of cleaning surface by a series of short instead of one or two long sieves, and thus accomplish the result sought.

484 The claims of the last reissue are—

1st. "The combination of the zigzag screens and boxes B C, when the same have a lateral shake motion, or one at right angles to the passage of the grain, in such a manner as to have the grain pass consecutively over and through them, and arranged relatively with each other, to operate substantially as and for the purpose herein set forth"

2nd. "The series of zigzag screens and boxes B C, with or without the troughs E, and having a lateral shake motion, in connection with the fan G and spout H, substantially as herein set forth."

These claims were certainly no broader, if as broad, as the invention.

The conclusion is that the invention was new and useful, and that the patent was properly granted.

As to the importance of the invention, the testimony of a number of large and practical millers is introduced. These millers have used app't's machine for from 5 to 12 years, respectively. They all testify that it was the first machine upon the market which actually made a comparatively perfect separation, and that with it they were enabled to take and use mixed grain for the manufacture of flour, and to make therefrom and article not deteriorated by having oats ground therewith.

They unite in testifying to the great importance of the invention,
485 and connect this importance directly with the features of invention claimed. They also state that such machines are essentially the machine described in the patent with which they profess to be familiar. As to its value, they give no estimate in dollars and cents.

App't, however, proceeds on the basis that the royalty which the present manufacturer is willing to pay is a correct estimate of what

each machine is worth to the public; that is, that the patented machine must be worth to the public at least the enhanced cost due to the royalty. This royalty is on an average $95, as shown by statements of applicant and his licensee, Haltman. He then states that there are now, to the best of his belief, over $7,000 millers in the U. S. who could profitably use his separator, say one to each mill, which would figure up a value of nearly $700,000 for the invention. While this method of setting out the ascertained value of an invention seems to be very loose and unsatisfactory, a recapitulation of "might have beens" rather than "has beens," yet the testimony is clearly to the effect that the invention was valuable, and that applicant deserved a good reward for his endeavor. His statements of acc't seem full and precise, and show, including royalties and all receipts, the receipt of $14,452.24, and expenditure of $11,264.08, leaving gross profit $3,188.16. Against this he has charged nothing for his own time and services, A reasonable
486 charge therefor would have undoubtedly left the patent in his debt. This secures a very inadequate reward.

The causes thereof he sets out as follows:

Primarily he disposed of part of the patent to obtain facilities for making and introducing the machine, and he and his assignees found the firm of "J. L. Booth & Co." engaged therein. A Mr. Hall was the capitalist of such firm. Owing to disagreement he withdrew and manufactured solely on his own acc't. Booth and Co. had then to raise capital for the business by means of loans and discounts, generally an expensive and hazardous method of doing business. Soon after the granting of this patent, rival inventors claimed by app't to be infringers, started in and cut under Booth on the market, eventually almost forcing him from the field. He attempted, he swears, to commence suit against them; these proceedings necessitated the reissue obtained in the case, and finally the suits had to be abandoned, app't not being able to furnish acceptable bonds. This litigation and consequent depression of the market, especially west, the seat of the litigation, had such a discouraging effect that in 1864 app't and his partners quit business after five (5) years of persistent effort and hard work. These years must have resulted in a loss, for in '59 app't had sold his partners a ½ interest for $4,000; one of them, Flint, owning ½ thereof or ¼ interest in the whole, sold back to applicant for $150 00.

487 After the lapse of a couple of years app't licensed A. K. Haltman, of Saint Louis, to manufacture; he has since made and sold 48 of the large sizes. In 1871, app't commenced suit vs. Turner, Parks & Co., of Northern Ohio, and in 1872 vs. Todd & Co., and Yeager & Co., of Saint Louis, and T. W. Baxter, of N. Y. By stipulation the latter three are to abide the result of the 1st suit. Of course while such suits are pending and while both plaintiffs and defendants are making charges and counter charges of infringement, &c., it is hard work to put any considerable number of machines upon the market. App't's solicitors in these suits testify that the Turner, Parks, & Co. case is ready for trial and will be pressed to an issue.

In view of all these circumstances the evidence seems to establish the fact that applicant was reasonably diligent in introducing his invention and that he took all steps therefor possible under the circumstances and complications surrounding him, and that his failure to reap an adequate reward was due to no fault or negligence on his part. Some of the defendants in the suits above noted have appeared at this almost the last day as remonstrants; of course it is not within the province of the examiner to examine into or report upon any grounds they base their

opposition upon. But he desires to state that he has examined the references cited in defendants' answer and that he found nothing therein to warrant him in reporting adversely upon the novelty of the
488 claims in this reissue. It does not appear that the interests of the public would in any way be injuriously affected by the grant of applicant's prayer.

As presented, the case seems to be a meritorious one and one complying with the requirements of the law.

Respectfully submitted.

Z. S. WILBUR, *Ex'r.*

Room 98, Sept. 2nd, 1873.

489 The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office.

In testimony whereof I, M. D. Leggett, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-fourth day of September, in the year of our Lord one thousand eight hundred and seventy-three, and of the Independence of the United States the ninety-eighth.

[SEAL.]

M. D. LEGGETT,
Commissioner.

Application of J. L. Booth for the extension of the patent for a grain separator, granted to him September 20th, 1859.

U. S. PATENT OFFICE,
September 16th, 1873.

To the honorable Commissioner of Patents:

We respectfully submit the following report:

Several questions have been raised and vigorously contested in this case. The most serious difficulty has been found in settling the objections to the novelty of the invention, especially that presented by the reference to the patent granted to Samuel Canby, Dec'r 28th, 1852, and reissued Nov. 14th, 1854.

The applicant's invention is intended mainly to separate wheat from oats and cockle seed, after it has gone through the usual process of winnowing. To effect his object he employs a number of sieves, one
490 above the other in one frame, which are inclined alternately one way and the other, so that the grain will run down one way on one, and when it falls through on the one below will run the other way. Under each sieve, however, is a shelf parallel to it, and forming with the sides of the sieve frame a box which prevents the grain from falling on to the next sieve until it has run down nearly the length of the frame, where an opening in the shelf permits it to drop. The whole frame with its sieves is made to vibrate transversely to the direction pursued by the grain and the sieves are made shorter than usual in that direction. The sieves are perforated with holes of such a size as to permit the grains of wheat to fall through them readily and to run down through the whole course, where another finer sieve separates the cockle. The short and rapid vibrations of the sieves cause the oats to rise to the top of the mass and to run over at the ends of the seives into troughs prepared for the purpose.

Canby's machine is intended for winnowing. The model and drawings

represent it as having a single inclined sieve which vibrated across the course of the grain. Underneath it is a short shelf which drops the grain upon a finer screen below, inclined in the opposite direction and vibrated with the sieves above it. In these respects it bears a
491 striking resemblance to the applicant's; but Canby's specifications neither of them mention these particulars, and the only allusion they make to them is to name the letters which indicate the sieve and screen; they are entirely taken up with a description of some mechanism for regulating the blast in which he claimed to have made an invention. He makes no provision for catching the oats, and they must either be carried away with the chaff by the blast or remain with the wheat and be stored with it. Having an entirely different object in view, he evidently gave no attention to the measures necessary to render his machine available for separating the wheat from the oats, nor could it be made to effect that operation without material alteration. We do not consider it, therefore, as an anticipation of the applicant's invention. Other references were made by the remonstrants, but on the argument none of them were urged. The invention must on the whole be pronounced new when patented.

In April, 1860, J. A. Vaughn obtained a patent for what may be regarded an improvement on the applicant's machine, and embodied its essential features. The applicant on seeing it pronounced it an infringement, but at the same time approved of the changes made in the form of it so much that he afterwards adopted most of them in all the
492 machines he made. He is charged on this ground with having abandoned his own invention and taken up Vaughn's. The most important feature which he took from him was that of making the sieves narrower across the course of the grain, and this is a mechanical variation which he was at perfect liberty to adopt. He did not separate the oat troughs from the sieve frame as Vaughn did, nor did he follow Vaughn's pattern in any other essential feature.

His statement reveals a series of embarrassments and discouragements, of struggle against narrow means, litigation, and strife with infringers, all which drove him and his associate to give up the manufacture in 1861, although he continued to license others to make his machines. He still cherished the purpose of resuming it as soon as he could vindicate his title to the invention. He has clearly been guilty of no negligence in placing it before the public.

His accounts are very full. He charges himself with $14,452.24 received from the invention. To this should be added $2,630 due from licens's on account of royalties, making in all $17,082.24. He has expended and lost in the business $11,264.08, and owes, besides, $1,600.00 to the counsel employed in conducting the suits upon his patents.

When he broke up in 1864, one of his partners owed him $2,200
493 on account of the business of manufacturing, and this he has lost entirely. We see no reason why this should not be included, and it would make his account against the invention amount to $15,064.08. The balance he has received would be $2,018.16. This includes nothing for his own time, which if charged at a reasonable rate would turn the balance and show the invention indebted to him. The value of it is undoubtedly large. It is clear that the patent ought to be extended.

S. H. HODGES,
ELLIS SPEAR,
Examiners-in-Chief.

Report approved, and extension will be granted upon compliance with the rules as to payment of final fee.

M. D. LEGGETT,
Commissioner.

SEPT. 16TH, 1873.

494 The U. S. Patent Office to all persons to whom these presents shall come, greeting :

This is to certify that the annexed is a true copy from the records and files of this office of the letters patent granted Jas. Vaughn, dated Jan. 8th, 1861, No. 1120, for "Imp't in Grain Separators," and the corres. pondence in the case.

In testimony whereof I, Samuel A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this eighth day of February, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.] SAM'L A. DUNCAN,
Acting Commissioner.

Reissue No. 15; whole No. 1120.

The United States of America to all whom these letters patent shall come :

Whereas James A. Vaughn, of Cuyahoga Falls, Ohio, has alleged that he has invented a new and useful improvement in grain separators (for which letters patent were issued to him, dated April 24th, 1860, which letters having been surrendered by him, the same have been cancelled, and new letters ordered to issue to him on an amended specification), which he states has not been known or used before his application; has made oath that he is a citizen of the United States, that he does verily believe that he is the first and original inventor or discoverer of the said improvement, and that the same hath not to the best of his knowledge and belief been previously known or used; has paid
495 into the Treasury of the United States the sum of fifteen dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said James A. Vaughn, his heirs, administrators, or assigns, for a term of fourteen years from the 24th day of April, one thousand eight hundred and sixty, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said James A. Vaughn in the schedule hereunto annexed, and made part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington, this eighth day of January, in the year of our Lord one thousand eight hundred and sixty-one, and of the Independence of the United States of America the eighty-fifth.

JACOB THOMPSON,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

S. T. SHUGERT,

Act'g Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, James A. Vaughn, of Cuyahoga Falls, in the county of Summit and State of Ohio, have invented certain
496 new and useful improvements in grain-separators, and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Fig. 1 represents a longitudinal vertical section through a grain cleaning and separating machine after my plan.

Fig. 2 represents a vertical cross-section through the same.

Similar letters of reference where they occur in the separate drawings denote like parts in both of the figures.

In the separation of grain from impurities gathered with it, zigzag screens have been used in connection with a shake motion and a blast, several instances of which may be found in the records of the Patent Office. Boxes have also been connected heretofore to shaking-screens to catch the grain, such as oats and other material that passed over the screens. The difficulty in connecting these boxes with the screens is this, that the boxes become loaded with grain, and as this load has to be shaken with the screens, it requires much power and is a drag upon the power required to give motion to the screens, impeding their free and easy vibration. I am also aware that a series of long zigzag screens and a long fan have been arranged in a frame to make a grain separator. These are very objectionable, first, because the screens are difficult of access, liable to clog, and must be often cleaned to be at
497 all efficient; and second, as to a long fan, it cannot be made to produce an uniform blast throughout the wind trunk, because the air must be drawn into the fan case at the ends only, and none at the centre; the consequence is that there is a sharp blast at the ends and comparatively no blast in the middle of the wind trunk. These imperfections make such a grain separator of comparatively little or no practical value, and my object and aim has been to overcome these objectionable features, which I have effectually done, as I will hereafter explain.

The nature of my invention consists, first, in combining a series of zigzag screens and directing boards that have a shake motion communicated to them, with stationary chambers to receive the material that passes over said screens for the purpose of avoiding the load and drag that is upon such screens, when they have the chambers or boxes united with them; and second, in combining with a series of zigzag screens and directing boards that have a shake motion communicated to them the stationary receiving chambers, and a short fan; and third, the combination of a directing board, cockle riddle, and cockle board, the objects of which will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents the main frame of the separator, in which I
498 arrange a second frame, B, that carries a series of zigzag riddles, C, D, E, F, G, H, I, and underneath them a series of directing-boards, J, K, L, M, N, O. These riddles and directing-boards incline across or the narrow way of the machine, which

admits of their being easily cleansed from one end or side without being incommoded by the blast trunk, as is the case when arranged lengthwise of the frame. P is a directing-board underneath the series of screens and their boards which carries the grain to the extreme end of what I term the cockle screen Q, as it is perforated to allow cockle or impurities of about its size to pass through it on to a cockle-board, R, which directs it out of the machine, whilst the grain from which it has just been separated passes into the blast-trunk S at *a*, and is acted upon by the blast from the fan T.

The fan-case U is arranged across the machine so as to contain a short fan, and is consequently more evenly supplied with air than if arranged lengthwise of the frame; the wind-trunk S, being narrow too, affords an uniform blast, which a wide one would not afford for reasons above stated; the lighter impurities are blown out at *b*, the light grain at *c*, and the full or heavy grains at *d*. The oats, sticks, and other impurities that pass over the screws drop into the chambers V V, which are stationary and not connected with the screen or screen-frame, and pass out at *e*, as represented by dotted lines in fig. 1, at the sides of the
499 machine, and the cockle runs off at *f*, each delivery for each specific separation of the several grains, seeds, or impurities being separate from the others.

W is a shaft to which the power that operates the separator may be applied. It has upon it a pulley, *x*, over which a belt may pass to drive the fan, said belt passing around a pulley on the fan-shaft for this purpose. On the shaft W there is a cam, *g*, for vibrating the screen-frame B, with its series of screens and boards, said screen-frame being held up against the cam by means of the springs *h*, to which it is connected. The vibration which the screen-frame may receive from a cam without producing an actual jarring motion may be very great, and is peculiarly adapted to the separation of oats from wheat. It is obvious that oats will readily pass through a screen that wheat will pass through, provided the oat goes point foremost into the perforations, and a jarring motion like that produced by a crank will so turn the oats into the openings in the screen and allow it to go through with the wheat. So much so is this the case that 200 or 250 vibrations of the screens by a crank is the limit that will admit of the oats passing over without turning and going through the screen, whilst with a cam motion I can run my screens up to 400 and 450 vibrations, and correspondingly increase the capacity of the machine, as it is of course limited only by the
500 quantity of grain that can be passed over the screens.

The changes which I have effected in this class of machines has given it an importance and value not heretofore known. The long screens, and the long fans, and the wide trunk, and the shaking grain-boxes, and the crank motion were all objectionable. I have dispensed with them all, and have made an entire different reorganization, by which an imperfect machine has become one of the most valuable ones connected with the cleaning and separating of grains from the grosser seeds, filth, and impurities.

The grain is fed into a hopper that stands over an opening, *i*, in the top of the machine, and passes over and through the series of screens and boards, each passage over each screen taking out the oats, sticks, &c., whilst the wheat, with some finer impurities, pass from directing-board to screen, and from screen to directing-board, until the finer impurities pass through the screen Q, and the wheat passes into the blast-trunk, where it is cleaned and further separated from lighter grains.

The heavy wheat, the lighter wheat, the dirt, chaff, or filth, the cockle, and the oats all have their separate exits, though all fed in at the same place. The separation is perfect and expeditious, and the machine easily kept clean, requiring but little power to operate it; is cheap, durable, and very efficient.

501 Having thus fully described the nature and object of my invention, what I claim as new therein and desire to secure by letters patent is—

First. In combination with a series of zigzag screens and directing-boards having a shake motion the stationary chambers for receiving the material therefrom, substantially as herein described.

I also claim the combination of the series of zigzag screens and directing-boards having a shake motion, the stationary receiving chambers and short fan, when arranged to operate substantially as herein described.

I also claim the combination of the directing-board P, cockle-riddle Q, and cockle-board R, substantially as and for the purpose herein described.

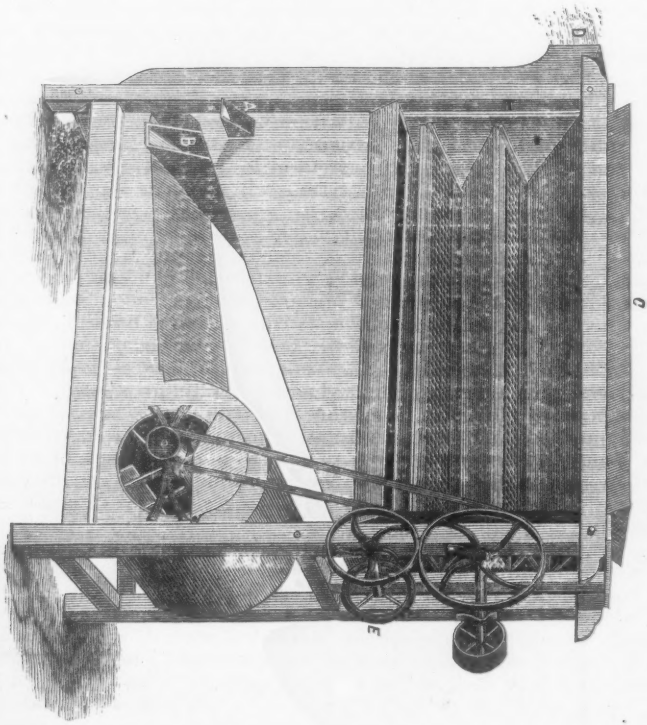
Witnesses: JAMES VAUGHN.

P. G. SOMERS.

G. PARKS.

(Here follows diagram marked page 501.)

502 *Plaintiff's Ex.—Circular.*



Directions for setting up and running Booth's repeating grain separator.

Patented Sept. 20th, 1859. Reissued Sept. 25th, 1860.

It is recommended to set this machine to take the grain after it has passed through some other simple process—taking off the straws, heads and chaff; and as all mills have something of this nature, it is not required of this machine. Therefore much is saved in price, also avoiding combination and a vast amount of dirt and dust, which only goes to ruin and destroy any nice piece of machinery.

Let the machine be placed level, and in such a place as will best accommodate it to receiving the grain, attaching the power to drive it, and taking the grain from under it. The grain should be let into the hopper, in such a way as to spread it on the sieves. To feed, raise the slide-board to hopper, from three-eighths to one-half inch. Give the sieves all they will do without running over. The proper motion is obtained by driving the drive-shaft containing a 6-inch drive-pulley as near 220 revolutions per minute as may be. By observing the above cut, it will be seen how the fan-belt is put on, which also drives the shake. Be particular to keep all the journals well oiled, and also keep them in snug running order; for, if the boxes are loose, the sieves will be likely to shake off wheat. Keep the sieves brushed off as often as convenient. Regulate the blast to take out such a quality of screenings as required, by moving the side wings on fan case. Before starting it, loosen all the nuts and bolts, and so adjust them that they will work snug, and not so tight as to heat. Each sieve is provided (except the upper one) with zinc slides, to cover up a portion of the large holes, and for small grades of wheat may remain in; only see that they are shoved back as far as possible. For large grades of wheat these slides are designed to be taken out if in a merchant mill, but if it is a custom mill this would need too much, attention; therefore it would be as well to cut them in about the centre, using them only about one-half the width; this would give a few more large holes, and give general satisfaction, although the more large holes left uncovered by the zinc, the less perfect it will operate. The cockle sieve is the very bottom which carries the grain into the wind-spout, and should be rapped with a hammer and block of wood, so as not to mar it, on its central edge once a week, or more frequently, to clear it of obstructions.

Fasten the machine down firmly with braces.

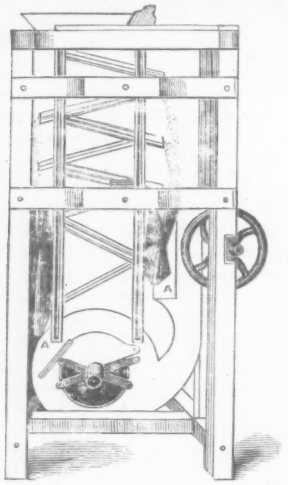
Do not put on the belts too tight, as it may break the journals and tend to ware them. If the machine does not operate well, please address the undersigned, stating difficulties, and you will be advised.

P. S.—A hand mill for cleaning seed wheat for farmers is now made. It is sold to be used for that purpose in certain territories, or one or more towns, and the party buying it cleans the grain in his own town for so much per bushel. One man, with a capital of one or two hundred dollars, can make from six to twelve dollars per day.

Address,

J. L. BOOTH & CO.,
Rochester, N. Y.

503 I shall resume the manufacture and sale of them under the license and according to the terms therein expressed. I also have Mr. Booth's guarantee as to his right of use, and to protect all others in the free and continued use of the same as manufactured under his patents. I also agree to give a written guarantee for the right of use to all persons buying of me my St. Louis zig-zag separator.



The following certificates were given Mr. Booth when this first machine, with his zigzag sieves, fan, and spout, as seen in the small cut (end view) at the left, was first put up at the large mills of Rochester. It is still in use by the celebrated millers of New York, Messrs. Hecker Bros., and they will use no other for spring wheat. The sieves of these first separators were six feet in length, and the same generally narrow, widths as in all others. The capacity of the machines, while maintaining perfect separation, always being governed by length and not width of sieves.

Ex. Certificates. Master.

ROCHESTER, N. Y., *Nov. 30th*, 1859.

J. L. BOOTH, Esq.:

DEAR SIR: You wish me to contribute what I know with reference to your new "Repeating Grain Separator." I would say that, so far as my experience goes I can perhaps say more than any other as regards its first introduction into any flour mill. Some nine months since I visited your office, then in New York City, at your request, and there saw the first exhibition of a model of your machine, and being so well pleased with its performance, I entered into a contract with you to build a full-size practical machine, and set it up in my mill, "The Crescent Mills," at Rochester, N. Y. You have done so; and I can say that after a sufficient test of the same, it has proved to do just what I hoped it would when I saw the first model exhibition in New York City, knowing, as I did at that time, if you could perform on a large scale what you did with that small machine, you would certainly achieve what no other person has done towards forwarding the interests of the miller, as well as add to the productive industry of our country. Being engaged in milling for many years, I had felt an especial interest in seeing something that would effectually act upon our Western wheat so as to separate the oats from the same before being ground, although so often said by many that it could not be done. I now feel that my early interest in this invention has been amply rewarded. I therefore cheerfully refer all to the machine itself, who must see it to fully appreciate it. I take pride also in being able to say that the "Crescent Mills" of this city has the honor of being the first recipient of your most excellent improvement. I recommend it to every miller as worthy of his immediate

adoption. H. N. Peck, who is at present the lessee of the "Crescent Mills," can speak for himself.

Yours truly,

G. W. BURBANK.

ROCHESTER, N. Y., *May* 1, 1860.

J. L. BOOTH, Esq.:

DEAR SIR: Having thoroughly tested Booth's repeating grain separator, which was put in my mill last June, I can say that I consider it an improvement which cannot be spoken of too highly. It proves to be in the class of cleaning machinery just what has been for years
504 wanted. Its greatest novelty consists in the separating of oats from Western wheat, which has always been looked upon as a great objection in this class of wheat for milling purposes. The improvement in flour and the whole process of manufacturing the same has been highly improved. Should I present all I might say as to the merits of this machine and its advantages to the miller, I fear those not having seen it would not give due credit to my account; therefore I cordially ask all to come and witness for themselves. This invention is one that shows for itself. I have cleaned out and sold, at an extra price, nearly five thousand bushels of better oats than can be found in market. All of which have been gleaned from this Western wheat by your machine.

Yours respectfully,

H. N. PECK.

"FRONTIER MILLS," BLACK ROCK, N. Y., *Nov.* 30, 1859.

J. L. BOOTH, Esq.:

DEAR SIR: In reference to your new separator put up in our mill at this place some two months since, we would say that it excels anything that we have ever seen, and in its adaptability to the cleaning of Western wheat containing oats is in fact marvellous. We have up to the present time (about sixty days) obtained over four thousand bushels of oats—all in a condition complete for market, and bringing the highest market prices. It is astonishing to us, as well as others visiting our mill, to see the large amount of oats contained in Western wheat. The advantage in separating these oats from wheat before grinding is obvious to all millers. We would say in conclusion that your invention is worthy of a place in every good mill, and will, with others as well as ourselves, be looked upon as one of the most valuable improvements of the day, and one which has been long needed and much looked for.

Respectfully yours,

WHITNEY & HALL.

FRONTIER MILLS, BLACK ROCK, N. Y., *May 1st*, 1860.

J. L. BOOTH, & CO.:

DEAR SIRS: Some two months since I added two more of your repeating grain separators to my cleaning works, in the Frontier Mills, Black Rock, and although I before considered I had a complete arrangement I did not do the work so fast as I could wish. With the additional machines I find not only sufficient capacity, but the improvement in the construction of machines, and also their performance, most admirable. The size of the machine for doing the same amount of work per hour being more than one-half diminished, your machine is now a combination of simplicity, economy, perfection, and durability. I will add that

from the use of your machines I am receiving higher prices for my flour than heretofore, and instead of grinding some eight or nine thousand bushels of oats with my wheat, the past season, and a wonderful amount of black weeds and sticks, I have ground pure wheat. It may be said by some that my yields must be proportionably less. If so, I have not yet been able to discover it, and a reason for this is the perfect economy in which your separator cleans out the screenings; the hundreds of bushels of small wheat before blown out is now all saved. I must say, in this one particular your separator is the most economical of any I ever saw; in fact, it would tend to depreciate rather than exalt it, to compare it to any known machine.

Respectfully yours,

GEO. J. WHITNEY.

505 NORTHERN DISTRICT OF OHIO, *ss:*

It is hereby certified that the foregoing transcript contains true copies of all the pleadings, orders, judgments, and other journal entries of the said circuit court in the above entitled cause, with the testimony and exhibits (except models) used on the trial thereof in said court.

Witness my official signature and the seal of said circuit court at Cleveland, in said district, this 24th day of September, A. D. 1877.

[SEAL.] EARL BILL,

Clerk of the Circuit Court for said District.

Clerk's fees on transcript, $198.65.

(Indorsement on cover:) No. 233. George Parks, Grant B. Turner, William A. Taylor, and James A. Vaughn, partners as Turner, Parks & Co., appellants, vs. Jonathan L. Booth. N. Ohio C. C. U. S. Filed 6th October, 1877.

APPELLANTS' BRIEF.

SUPREME COURT OF THE UNITED STATES.

No. 233.

GEORGE PARKS, GRANT B. TURNER, WILLIAM A. TAYLOR, AND JAMES A. VAUGHN, PARTNERS AS TURNER, PARKS & CO., APPELLANTS,

vs.

JONATHAN L. BOOTH.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR NORTHERN DISTRICT OF OHIO.

Supreme Court of the United States.

GEORGE PARKS, GRANT B. TURNER, WILLIAM A. TAYLOR AND JAMES VAUGHAN, PARTNERS AS TURNER, PARKS & CO., APPELLANTS,

vs.

JONATHAN L. BOOTH, APPELLEE.

No. 233.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR NORTHERN DISTRICT OF OHIO.

APPELLANTS' BRIEF.

STATEMENT.

The decree of the Circuit Court, from which this appeal is taken, was rendered on 15 December, 1876, in a suit brought by the appellee, Jonathan L. Booth, against the appellants, Turner, Parks & Co., for alleged infringement of re-issued letters patent, for improvement in grain separators.

The patent sued upon is a *second re-issue*. The original patent, No. 25,484, was granted to J. L. Booth, September 20, 1859; re-issued September 25, 1860, No. 1,043; re-re-issued November 29, 1864, No. 1,826.

The Court rendered a decree on 9 May, 1874, sustaining the validity of the complainant's patent, and adjudging that the defendants had infringed, and that the complainant do recover of the defendants the profits, gains and advantages which the defendants have received, or which have arisen or accrued to them from said infringement of said patent by the

manufacture, use and sale of the improvements described and secured by said re-issued letters patent since November 29, 1864, and also such damages in addition to said profits as the complainant may have sustained by reason of said infringements."—*Rec.* p. 13.

Reference was made to a Master to ascertain the damages and profits.

On 24 November, 1875, the report of the Master was filed, awarding to complainant—

On account of profits, - - - -	$9,944.09
And as damages:	
Expenses of conducting the suit, - -	627.20
Compensation for complainant's time, - -	420.00
	$10,901.29

To this report exceptions were filed by both complainant and defendant, which were all overruled by the Court, excepting that made to the allowance for complainant's time, and the Master's report was, as thus amended, confirmed on the 15th December, 1876, and a final decree was rendered against defendants for the sum of $11,184.12, being the amount found by the Master with interest.—*Rec.* p. 30.

From that decree this appeal is taken by defendants.

The complainant did not appeal.

PLEADINGS.

The Bill of complaint is in the usual form so far as the stating and charging portions are concerned. The prayer for relief so far as it affects the questions raised in this appeal, is as follows:

"To the end therefore that the said defendants may respectively full, true and perfect answers make, &c. * * and that the defendants may be decreed to account and pay over to your order the *profits* of which the defendants have deprived your orator, the infringement of said patent and by such unlawful use, manufacture and sale of said improvement

in grain separators, * * and that your orator may have such other and further relief as the nature of his case shall require, and as shall be agreeable to equity.—May it please your Honors, &c." The bill then closes with a prayer for injunction, and subpœna (Record page 3); but does not pray for a decree for *damages*, as distinguished from profits. In their answers and amended answers the defendants

1. Deny that Jonathan L. Booth was the original and first inventor of the invention claimed in his re-issued patent.

2. Allege that the invention claimed in said re-issued patent was before the invention of Booth described in certain letters patent of the United States. Some of which are the following:

U. S. patent to Flickenger & Krim No. 2,649, 28 May, 1842, machine for cleaning grain.

U. S. patent to Benj. F. Trimmer No. 21,056, 27 July, 1858, machines for cleaning grain.

U. S. patent to Samuel Canby, No. 9,500, December 28, 1852, grain separators.

3. That certain persons had prior knowledge and use of said invention, viz: John Scupholm at Etna mill, in Akron, Ohio, and John Bean at the mill of S. M. Wertz, in Hudson, Michigan.

John Bean, at his manufactory near Belleville, Ohio, and in Hudson, Michigan.

4. Allege that they are making grain separators under letters patent to James A. Vaughan (one of the defendants) dated 24 April, 1860, reissued 11 June, 1861, and claiming the right so to do.

5. Allege that in so far as the grain separators made and sold by them are similar to the devices covered by complainant's parent, they were well known and in common use prior to the alleged invention of complainant.

6. Deny that they are infringing any exclusive rights of the complainant.

7. Allege that complainant's patent is not for a patentable subject matter.

8. Allege that the complainant's re-issued patent is for another

and different invention from that described and claimed in his original patent.

9. Allege that complainant after making a few grain separators as described in his original patent, and finding them not practically useful, abandoned the construction described therein, and adopted the construction described in the patent to James A. Vaughan before referred to.

The questions involved in this appeal arise under the final decree of the Court in favor of complainant and the Master's report. There does not appear to be any opinion of the Court on the record. The assignment of errors is therefore necessarily confined to the decree of the Circuit Court, and, so far as the award of profits and damages is concerned, to the Report of the Master and the ruling of the Court on the defendants' exceptions thereto.

ASSIGNMENT OF ERRORS.

I. The Circuit Court erred in decreeing that the equity of this case is with the complainant, and that the facts stated in the bill of complaint are true, and especially in deciding that the re-issued letters patent granted to complainant on the 29th of November, 1864, is and was valid, and for a new and useful invention.

II. The Circuit Court erred in not deciding that said re-issued letters patent are void because the patentee was not the original and first inventor, for the following reasons:

1. Because the alleged invention embraced in the *first claim* is anticipated by the machines made and sold by John Bean and by letters patent to Samuel Canby and letters patent to B. F. Trimmer, all being prior in date to complainant's invention.

2. Because the alleged invention embraced in the second claim of said re-issue is anticipated by letters patent to Samuel Canby and letters patent to B. F. Trimmer, both being prior in date to complainant's invention.

3. Because the patent to Flickenger and Krim and the machine at Akron Mills, anticipate both claims of complainant's patent, having the same mechanical devices, operating in substantially the same manner, excepting in the direction in which the screens and boxes are shaken.

III. The Circuit Court erred in not deciding that the prior state of the art is such that there was no patentable novelty in the alleged invention, embraced in either of the two claims of said re-issued patent, for the reason that each of the following named devices was old and well known in the art prior to the alleged invention of complainant:

1. Zig-zag screens and boxes having a shake motion.

2. Zig-zag screens and boxes having a *lateral* shake motion.

3. Zig-zag screens and boxes having a shake motion in connection with a fan and spout.

4. Zig-zag screens and boxes having a *lateral* shake motion in connection with a fan and spout.

All of which devices were used in machines for cleaning and separating grain.

IV. The Circuit Court erred in not deciding that said re-issued letters patent are void for lack of patentable subject matter of invention, for the following reasons:

1. Because the first claim of said patent, by its terms, is not for any new mechanical device, nor for any new combination of devices, but for an old combination of old devices, when shaken *laterally* instead of endwise, the lateral shake being also old.

2. Because both of the claims of said re-issued letters patent are, by their terms, and, in fact, only differentiated from what was old and previously well known by the *lateral* shake of the screens and boxes as distinguished from an *end* shake, both lateral and end shake being old.

3. Because giving a *lateral* shake to an old combination of seives instead of an end shake (similar seives having previously been shaken laterally) involves mere mechanical skill, and not patentable invention.

4. Because the second claim of said re-issued patent is for a mere duplication of old and well known devices, such duplication not involving patentable invention.

5. Because the second claim of said re-issued patent is for a mere *connection* of a separating machine and a fanning machine, having no functional relation and being a mere aggregation of devices and not a patentable combination.

V. The Circuit Court erred in decreeing that the defendants had infringed any exclusive rights of the complainant under said re-issued letters patent.

VI. The Circuit Court erred in decreeing that the complainant do recover of the defendants such damages in addition to the profits as the complainant may have sustained by reason of the infringement, when there is no allegation in his bill of complaint that he has sustained any damages, nor any prayer asking for such relief.

VII. The Circuit Court erred in overruling the following exceptions taken by the defendants to the report of the Master, and in confirming the said report, notwithstanding such exceptions, viz.:

1st Exception. To the allowance of the sum of six hundred and twenty-seven $\frac{20}{100}$ dollars as damages, for the reason that the bill contains no prayer for damages. Record, p. 30.

2d Exception. That the items allowed by the Master as damages are not such as are by law receivable, especially the item of counsel fees. Rec., p. 28.

3d Exception. That the amount of damages allowed by the Master is excessive. Rec., p. 28.

7th Exception. That the Master made no allowance to the defendants for time expended in manufacture and sale of infringing machines. Rec., p. 28.

8th Exception. That the Master made no allowance to defendants for expenses of advertising and introducing the infringing machines, the complainant having neither made, sold nor introduced his machines since the date of his reissue. Rec., p. 28.

9th Exception. That the amount of profits awarded to complainants is excessive. Rec., p. 28.

10th Exception. That the Master awarded to complainant the whole amount of profits received by defendants from the

manufacture and sale of infringing machines, there being no proof nor presumption that the complainant would have received such profits if defendants had not made and sold these machines. Rec., p. 28.

11th Exception. That the machine manufactured by defendants was made under letters patent to one of said defendants and is materially different in construction, and admitted by complainant to be more economical in construction, less complicated and more practically useful than complainant's machine. Rec., p. 28.

13th Exception. That the Master allowed to complainant the defendants' profits on the entire machine, instead of confining the award to the profits on the features of novelty embraced in the patented machine. Rec., p. 28.

14th Exception. That the Master should have confined the award of profits to the advantage derived from the patented improvement, exclusive of the profits of manufacture, and of the profits of making the old machine known and used prior to complainant's alleged invention. The profits or damages should be confined to the value of the improvements only. Rec., p. 28.

15th Exception. Because, as appears from complainant's own testimony, the only invention covered by his patent is the direction in which the screens are shaken, and not otherwise in the construction of the machine itself. (p. 29.)

16th Exception. Because the only advantage derived by the respondents in the construction of their machine from the invention patented to complainant is a slight economy in construction, amounting to about one dollar on each machine. (p. 29.)

17th Exception. Because it appears from the evidence that respondents were free to manufacture and sell machines exactly similar in construction to those manufactured by them, provided the riddles had been operated with an end shake instead of a side shake, and that therefore they are only chargeable with the profit derived by them from such slight change of construction.

18th Exception. Because it appears from the evidence that

there is no advantage in the operation or use of the machine from the employment of the side shake over the end shake, and that therefore the measure of profits is the saving of one dollar on each machine in their construction. (p. 29.)

APPELLEE'S PATENT.

The subject of the patent in this suit is a grain separator, a class of machines well known and in use long before the alleged invention of the patentee.

The original patent (Record, p. 177) states the invention to consist "in the employment or use of a series of zig-zag screens and boxes, *having a proper shake motion*, communicated to them, and used *in connection* with a fan blast and spout, the whole being arranged substantially as hereinafter described, whereby the desired end is attained."

In the re-issued patent the invention is stated to consist in "the employment or use of zig-zag screens and boxes, or passages having a proper *lateral* shake motion communicated to them, and so arranged that the grain may pass consecutively over and through them, and be subjected to a thorough screening operation;

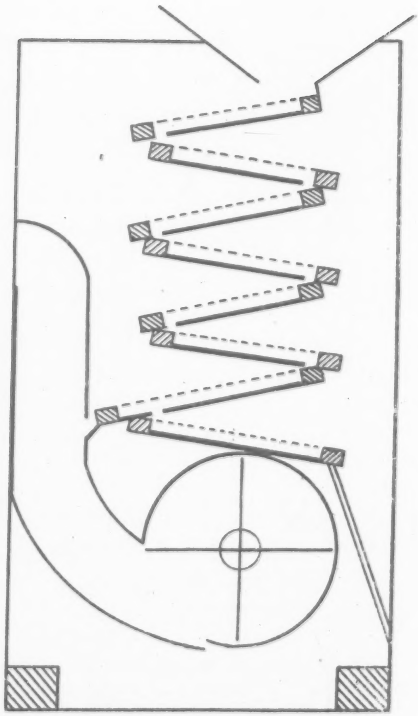
"Also in using in connection with the zig-zag screens and boxes aforesaid a revolving fan and spout, so arranged that the grain will be subjected to an efficient blast, for the separation of all light impurities therefrom."

The 'boxes' referred to in these patents are boards placed under and parallel to the inclined screens, to catch the grain which falls through them.

The machine as described consists of two parts, placed "*in connection*" with each other, and having consecutive operation, but no functional relation.

Booths Patent.

1859.



The first part of the machine is the separator, the object of which is to separate the grain (wheat) from oats and other substances of larger size than the wheat. The grain falls from a hopper on to the first inclined screen, passing through the screen on to the 'box' or board immediately below it, while the oats, being larger, slide down over the screen into a trough or receptacle. As some of the oats may pass through the first screen with the wheat, the process is repeated, the box of the upper screen depositing the wheat on the upper end of the next inclined screen, which also has a box or board under it. The screens and boxes are placed in reversed inclined position, or zig-zag, and receive a shaking motion to cause the grain to pass down the inclined screens and boxes. The number of such screens and boxes is not stated in the specification otherwise than as a 'series.'

The wheat thus separated by screening from oats and other impurities larger than the grains of wheat, passes into the other portion of the machine, which is a fanning mill; the grain falling into a spout is met by a blast of air created by a revolving fan, in which the dust, light grain and other substances of lighter *weight* than the grain are carried upwards, while the grain falls downwards.

This apparatus, then, consists of two machines, having distinct functions, but placed in connection, so as to operate one after the other.

In the original patent nothing is stated as to the direction in which the screens and boxes are to be shaken, whether endwise, in the direction of their inclination, or sidewise, in the opposite direction. As shown in the drawing, however, the shaking motion is a lateral one, in the reverse direction to that of the passage of the grain.

The claim in the original patent (Record, p. 179) is in the following words:

"*I do not claim any of the within described parts*, but I do claim as new and desire to secure by letters patent the inclined zig-zag screens and boxes *B*, *C* and troughs *E*, having a shake motion given them, and used in connection with the revolving fan *G* and spout *H*, the parts being arranged relatively with each other to operate as and for the purpose set forth."

As we shall presently see, there was nothing new in this claim. Grain separators having inclined screens with boxes or directing boards under them, set in zig-zag position, and having a shake motion, were old; and fanning mills, consisting of a rotary fan and spout, had been used in connection therewith.

The patentee, therefore, in order to obviate this difficulty, reissues his patent twice, the last re-issue being that on which this suit is brought, and in this re-issue he limits his claims to devices having a *lateral* shake motion, as distinguished from an end shake. It remains to be seen whether his claims, as so limited, are not anticipated by prior patents and prior use; and whether the use of an old machine or combination of devices is rendered patentable merely by changing the direction of the shake motion, even if such change were new.

SCOPE OF APPELLEE'S RE-ISSUED PATENT.

The claims are as follows:

1. The combination of the zig-zag screens and boxes B C, *when the same have a lateral shake motion*, or one at right angles to the passage of the grain, in such a manner as to have the grain pass consecutively over and through them, and arranged relatively with each other, to operate substantially as and for the purpose herein set forth.

2. Also, a series of zig-zag screens and boxes B C, with or without the troughs E, *and having a lateral shake motion* in connection with the fan G and spout H, substantially as herein set forth. Rec., p. 148.

Each of these claims is in terms limited by the words "when the same have a lateral shake motion," and "having a lateral shake motion," so that they cannot be construed to cover the very same devices when the screens and boxes have an end shake.

The patentee is bound by the limitation thus imposed. He can claim nothing beyond it.

Merrill vs. *Yeomans*, 94, U. S. 573.

Keystone Bridge Co. vs. *Phœnix Co.*, 95, U. S. 274.

Especially is this so when the limitation is that which distinguishes the re-issue claim from that of the original patent. The limitation of the claims to the peculiar motion of the devices, is an admission not only that the devices themselves are old, but that the combination of devices is also old, being only claimed to be new when the screens and boxes have a lateral shake.

The summary of the patentee's claim annexed to the specification admits that all not included in it is old.

Brown vs. *Selby*, 23 Wall, 181.

This, however, does not rest alone on legal construction.

As to the devices: the patentee in his original patent disclaims expressly any novelty. He precedes his claim with the words: "I do not claim separately any of the within described parts," and such disclaimer is binding on him under the re-issue.

Leggett vs. *Avery*, Supreme Court 17, Official Gaz. 445.

Mr. Osgood, the expert of the Appellee, so interprets both claims as to limit them to devices having a *lateral* shake; he says, in reply to cross-question 5, Record, p. 42:

Ans. In the first claim I should say that the novelty was the zig-zag screens and the boxes, where they have a shake motion at right angles to the passage of the grain, *covering those screens and boxes only when such shake motion is given in contradistinction to any other motion.*

In the second claim I should say the novelty was in those zig-zag screens and boxes having such lateral shake motion at right angles to the passage of the grain when combined with the fan and spout, *in contradistinction to any other than the lateral shake motion.*

Cross-Int. 18. Suppose the shaking devices in Exhibit B, instead of being connected with the end of the screens were connected with the side or edge, so as to shake them in the direction of the travel of the grain. Would such a machine be within the scope of the complainant's invention?

A. I do not thing it would; *I think that patent is confined to a shake which is at right angles to the passage of the grain.* Record, p. 43.

And the patentee himself makes the same admission.

Cross-Int. 31. Suppose your machine were provided with an *end shake*, would that be within your patent?

Ans. It is not, unfortunately for me. Record, p. 115.

If then, as we shall contend when we come to consider the question of the invalidity of the patent for want of patentable subject matter, the use of a side shake instead of an end shake is a mere matter of mechanical skill and does not involve patentable invention, both of these claims are void.

Construction of First Claim.

This claim is for a combination.

The elements of the combination are two, viz., screens and boxes.

This combination, however, is limited.

1st. By the *arrangement* of the parts; they are to be zig-zag.

2d. By the *motion* of the parts; which is to be lateral.

It will be noticed that this first claim is for a combination of screens and boxes, while the second claim is for a *series* of screens

and boxes. The difference is manifest. There is a functional relation between each screen and its box, because the board or or box receives the grain passing through its screen; but beyond this there is no combination of one box and screen with another, but a mere duplication of parts and repetition of action.

It is uncertain whether the zig-zag arrangement of the screens and boxes is intended to be claimed as new, as the term is only used as descriptive of the screens and boxes, but if it is, this also is limited by the side shake, which is plainly intended to be the main feature of this claim.

Construction of the Second Claim.

The *second* claim is for a series of zig-zag screens and boxes (with or without the troughs), and having a *lateral shake motion* given to them, and used *in connection* with the fan and spout. This claim is not for the *combination* of screens and boxes (that is, furnishing zig-zag screens with boxes), but for a *series* of screens and boxes placed zig-zag to each other, and having a lateral shake motion.

It will noticed that this claim is not for any of the separate parts in themselves considered, nor for using the screens and boxes as a *series* or in succession (which is not new, as we shall presently see), but for using them when they have a lateral shake, in connection with the fan and spout.

But what is a "series" as used in reference to this machine? The word series is derived from the Latin *sero*, to join or bind together, and it means a sequence without regard to the number of members, except that there must be more than one.

There is nothing in the specification or claim to indicate how many screens and boxes form a series; and we contend that in the meaning of the patent, having reference to the function performed by the use of more than one screen and box, two such screens and boxes are as much a series as three or more. For there is no more combination between eight such screens and boxes than there is between two, no change of operation resulting from increased number of screens and boxes but only a continuation of the same action in precisely the same manner. Increasing the number of screens and boxes

would not evade the patent if valid, neither would diminishing the number, if only two were left to perform the office of the combination; and if this be so, then the prior use of substantially a similar machine having a less number of screens and boxes, would anticipate the patent as fully as a similar prior existing machine, having exactly the same number of screens and boxes, as is shown in the complainant's patent.

In view of this fact, the patentee endeavors to draw a distinction between the use of two such screens and boxes having a *side shake*, and the use of three or more such screens and boxes having a *side shake*. On this point his expert, Rufus S. Osgood, testifies as follows:

"Cross-Int. 6. Is any particular number of screens and boxes, in your opinion, an essential element? A. I should say it would require more than one.

Cross-Int. 7. Two such screens and boxes, I mean such as are described in Exhibit A, would then come within the purview or scope of complainant's invention, as claimed in Exhibit A? A. I should doubt whether it would.

Cross-Int. 8. Why not? A. In the specifications mention is made of the use a series of zig-zag screens instead of a single set. My doubt in regard to it would be as to what is the distinction between the term 'set' and the term 'series'; whether the term 'set' means a single screen and box, or pair of each.

Cross-Int. 9. Would you not consider that two constituted a series? A. I should hardly regard it so in the sense the word is used in this specification.

Cross-Int. 10. How is it in the ordinary use of the term. A. I cannot say positively, but I think that a series would require more than two.

Cross-Int. 11. Would not two and four, with two as a multiplier, constitute a geometrical series? A. I cannot say.

Record, p. 42.

Cross-Int. 16. Would a machine having *three* screens and boxes, and otherwise constructed as in Exhibit A (complainant's patent), be, in your opinion, within the purview and scope of claims of Exhibit A? A. I think it would."—Record, p. 43.

We do not know what warrant there is for such a construction of the patent, gotten up, evidently, for the purpose of meeting the defendant's proofs. What right, we ask, has the appellee or his expert to select three or any other number of screens as within the patent, when two is not? Is it not a

mere question of duplication of parts, not to produce any new results, but only, as this expert claims, to do the work more fully? See Osgood's Dep., Cross-Ints. 12 and 13, p. 42.

Booth's separators, as made by him before he got up the present machine, consisted of a single screen, inclined in one direction, and having an end shake, under which was a directing board inclined in the opposite direction, the lower end of which opened into the spout of a fan blast, just as the lowest directing board does in his present machine.—See Defendant's Exhibit No. 9, Booth's Patent of April 8, 1851, and sketch on p. 160 of Record.

The change he made in getting up the machine for which the patent now sued upon was granted, consisted in putting the directing boards or boxes immediately in connection with the screens, in using more than one such screen and box, in placing them zig-zag to each other, so that the grain shall be delivered from one to the other in succession, and in giving a side shake instead of an end shake.

That there was nothing new in all this, we shall presently see, but this prior machine of appellee's seems to show what he means by his claims on the improved machine.

THE STATE OF THE ART PRIOR TO COMPLAINANT'S ALLEGED INVENTION SHOWS THAT HIS PATENT IS VOID FOR WANT OF PATENTABLE NOVELTY.

Machines for separating oats, garlic, sticks and other foreign matters from grain, as well as machines for removing from the grain, cockle, cheat and other lighter substances, have, as we shall see, been previously used in connection with each other, as one machine, and also so combined as to co-operate to effect the cleaning of the grain.

We shall now proceed to show by pre-existing patents, and by testimony as to actual use, that the following devices for separating wheat from foreign matters and impurities were patented, or known and used, prior to the alleged invention of the appellee:

1. Zig-zag screens and boxes having a shake motion.
2. Zig-zag screens and boxes having a *side* shake motion.
3. Zig-zag screens and boxes having a shake motion used in connection with fan blast and spout.
4. Zig-zag screens and boxes having *side* shake used in connection with fan blast and spout.

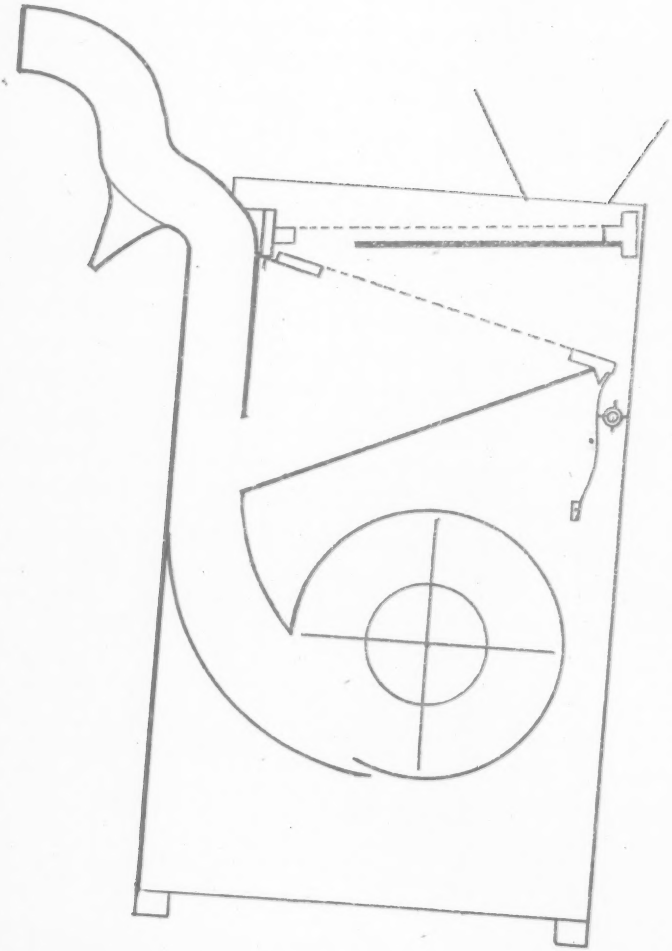
And we claim that any one of the four devices above named, if patented or known and used prior to appellee's invention, renders his patent invalid according to any interpretation which can be lawfully put upon his claims, and that the second of the above named devices anticipates the first claim of his patent, and the fourth device anticipates the second claim of his patent on the broadest construction which he can put thereon.

We will now proceed to examine the state of the art as furnished by the patents and other evidence in the record; bearing in mind that the claims of appellee's patent are in substance as follows:

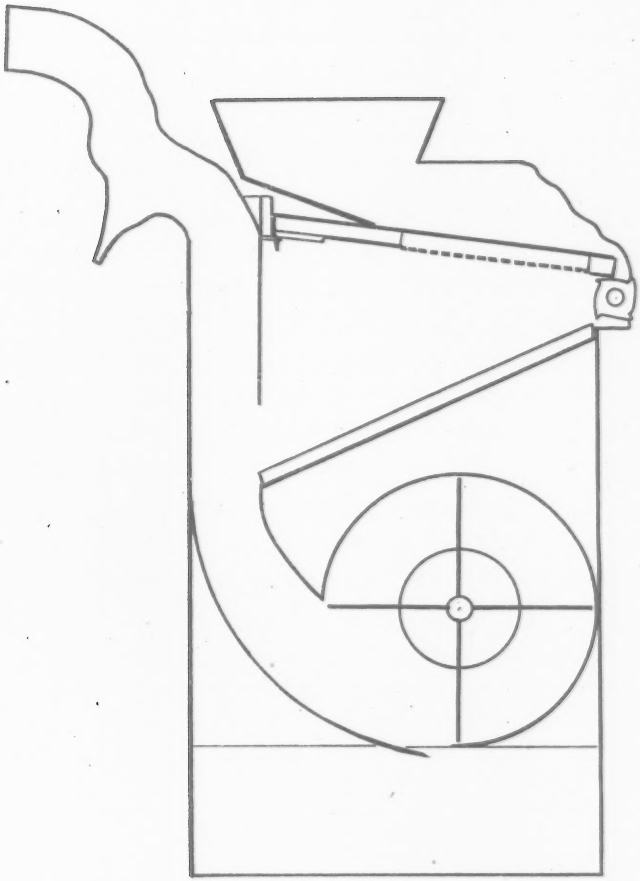
1*st Claim.* Zig-zag screens combined with boxes (or directing boards) and having a side shake.

2*d Claim.* A *series* of zig-zag screens and boxes having side shake in connection with fan and blast spout.

Akron Machine Spring of 1858.



Booth Machine. 1851.



We will first show that the subject matter of the appellee's claims in his re-issued patent existed before the date of his invention, with the difference of having an end shake as distinguished from a lateral shake.

AKRON MACHINE.

This machine (Exhibit Akron) was used in the Ætna mills, Akron, Ohio, from the spring of 1857. It was originally a grain separator, made by the appellee. This separator had only one seive, but in the spring of 1858 an extra seive (the top one) was added, with a parellel directing board, by one Eaves, a millwright, the new seive and directing board or box being inclined in a zig-zag direction to the lower one. These seives had an end shake. Connected with them is a fan and spout into which the grain (after having the oats, &c., separated in the separator) is made to fall into a spout to be acted upon by the fan blast, just as in the appellee's patent.

This machine as built by Booth, and altered in the spring of 1858 by Eaves, at the Akron mills, contains all the elements of the second claim of appellee's patent, viz., the zig-zag screens and boxes in combination with a fan and spout; but it has an end shake and not a lateral shake.

A model of this Akron machine is in evidence marked "Exhibit Akron." The machine was originally like that shown in Booth's patent of 1851, (Record, p. 172) and the sketch on page 160 of the Record. The changes made in it are proved by the testimony of John Sculpholm (Record, pp. 57–58). As altered, it has two screens placed zig-zag to each other. The upper screen has a directing board or box directly under and parallel to it, and the lower screen has a directing board which is inclined in the opposite direction to its screen. This, however, performs precisely the same function as if it were parallel to its screen, and is equally within the terms of the appellee's patent.

It will be noticed that the position and connection of the revolving fan and spout in relation to the separating devices (screens and boxes) is precisely the same as in appellee's patent.

That this was prior to the date of appellee's invention is proved by his testimony (Record, p. 38, Cross-Int. 16), where he says that he commenced his experiments on his machine in the Fall of 1858 and worked at it all Winter. And in his testimony on page 51 of the Record, Int. 3, Booth explains that the reason why he confined his claims in his re-issue to the lateral shake motion was because of this Akron machine; an admission that this Akron machine anticipated his invention, excepting as to the lateral shake motion.

FLICKINGER & KRIM'S PATENT, dated 28th May, 1842. Defendant's Exhibit No. 2. (See Record, page 152–155.)

This is a patent "for cleaning grain of garlic, smut, cockle, cheat and other foreign substances."

The wheat to be cleaned is introduced into a hopper at top of the machine, whence it falls on to a screen which inclines downwards from left to right; under this screen is a second screen parallel to it; and under the second screen is a directing board or box, also parallel to the first screen. Below the first pair of screens is a third screen, inclining in a reverse or zig-zag direction (from left to right), having a directing board or box under, and parallel with it. Below the third screen is the spout connecting with a fan blast.

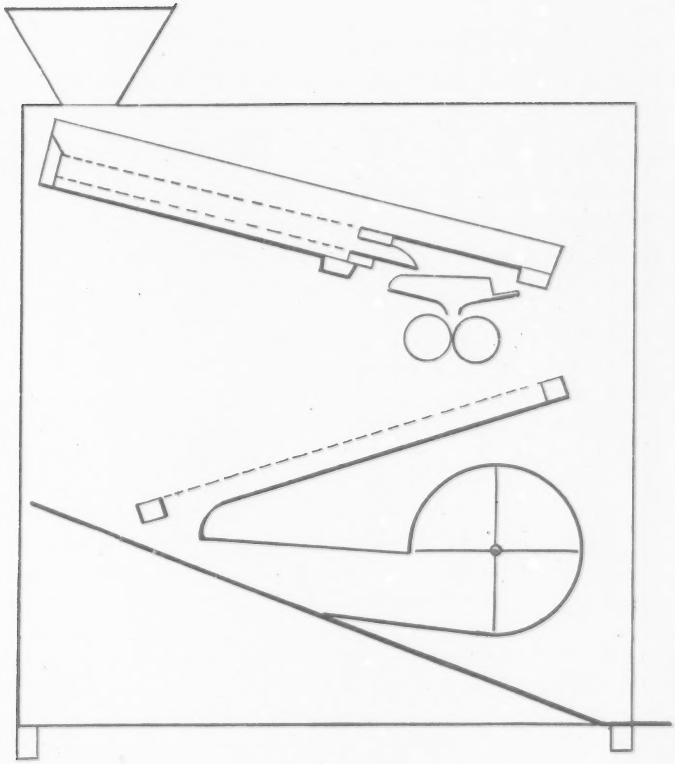
Between the two sets of screens and boxes are placed a pair of rollers for crushing garlic.

The zig-zag screens are set in a frame, to which an *end shake* is communicated.

The operation is as follows: The grain falls from the hopper on to the first screen, over which the larger sized impurities pass to a side trough and are carried away. The grain falls through the top screen on to the second screen, while the smaller impurities pass through to the second screen to the directing board beneath, whence they pass into another trough. The grain, with any garlic or other substances larger than the grain, then passes through a pair of rollers covered with india rubber, and thence on to the third screen, which removes any substance larger than the wheat, while the grain falls through the screen to the directing board or box, which conducts it to the spout of a fan blast which blows out the light impurities, allowing the grain to fall out at the bottom of the spout.

Flickinger and Krim Patent.

1842.



Here we have all the elements of both claims of complainant's patent, excepting that the motion is an *end shake* and not a *side* shake. The screens and boxes are placed zig-zag. There are not as many screens used as are shown in Booth's patent; but as we have seen, there is nothing in the specification or claim of Booth's patent which requires any particular number of screens and boxes.

APPELLEE'S RE-ISSUED PATENT FULLY ANTICIPATED.

The Akron machine and the Flickinger & Krim's patent just referred to, both have an end shake to the zig-zag screens and boxes; and in view of that difference, Booth testifies, (Record, p 59,) that they are not anticipations of his patent.

We now proceed to show the prior existence of grain separating machines having zig-zag screens and boxes, with a *lateral* shake, and connected with fan blast and spout, fully antedating both of the claims of his patents.

SAMUEL CANBY'S PATENT, dated December 28, 1852. Defendant's Exhibit 1. *Record*, page 149-151.

This is a machine for removing impurities from grain.

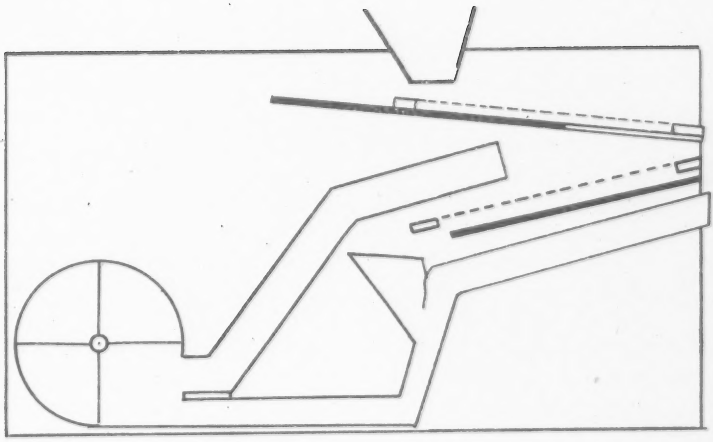
It consists of two screens, each having a directing board or box under and parallel with it. These screens are placed in a zig-zag direction to each other, in a frame which has a *side shake.* Below the lower screen and box is a blast spout, connecting with a fan.

The grain to be cleaned falls through a hopper on to the top screen which allows the grain to fall through it and retains the larger foreign matter, the grain falls on the directing board or box underneath, and sliding down it falls on the top of the next screen inclining in the opposite direction, over which it passes and falls into the spout of the fan blast, while the smaller impurities pass through the lower screen on the box below it and pass away.

Here we have two screens and boxes placed in a zig-zag direction to each other, having a lateral or side shake in connection with a fan blast and spout.

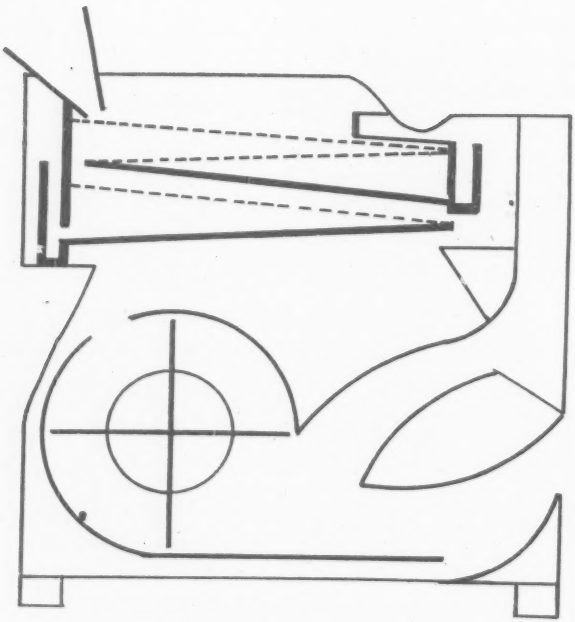
It differs from appellee's machine in not having so many screens.

Canby Patent. 1852.



B. F. Trimmer's Patent.

July 27. 1858.



B. F. TRIMMER'S PATENT, dated July 27, 1858. Defendant's Exhibit No. 3, Record, pp. 156–159.

The machine has three screens, placed zig-zag to each other, under each of the two lower screens is a box or directing board, which are not parallel to their screens but also zig-zag. The screens and directing boards are placed in a frame which has a gyratory *side shake*. Connected with the machine is a fan blast and spout.

The grain to be cleaned falls on to the top screen through which it passes, the screen retaining the chaff, oats, &c., which slide down it into a trough at one side. The grain then falls on the next screen inclined in the opposite direction. The grain falls on to the top of the second screen and slides down it to the top of the third screen, the chaff and other matters smaller than the grain pass through the screen on the board or box below it, and thence to the side trough; the grain then slides down the third screen, and falls into the blast spout, while the directing board or box carries off any remaining smaller impurities.

Here we have three screens, zig-zag to each other, two of the screens having boxes, and all having a gyratory side shake in connection with a fan and blast spout.

This patent presents the substantial equivalents of both the claims of complainant's patent.

JOHN BEAN'S MACHINE, A. D. 1852–3.

Model "Bean" is a model of a machine which the witness commenced to make in 1852 and 1853. He made from 100 to 200 of these machines.—Record, p. 44, Ans. 3.

This machine consists of three inclined sieves arranged zigzag, and with a lateral or *side* shake; it also has a fan.—Ints. 4 and 5, Record, pp. 44–45.

Sometimes instead of the lowest sieve he used a screen. When he used a screen at the bottom of the sieves the grain passed *over and through* the first two sieves consecutively, and over the screen.

When he used a seive as the lowest of the series the grain passed consecutively over and through all three sieves, just as in the Booth machine.—Int. 7–11, Record, p. 45. Cross-Int. 51, Record, p. 50.

Although the model shows only two seives and one screen, he tells us that ordinarily he used from four to seven screens and sieves in his machines.—Cross-Int. 10, Record, p. 47.

He tells us that the ordinary fanning machines had from three to four inclined sieves, but that in his machines the wheat passed over more screens and sieves than in the ordinary fanning mills, for the purpose of carrying wheat back and sifting it over.—Cross-Int. 19 and 20, Record, p. 48.

The square *side* shake he introduced into his machines in 1853.—Int. 4 and 6, Record, p. 44, 45.

He tells us that his object was to get a longer run of the wheat, thereby carrying off the coarse material, oats, &c.—Int. 8, Record, p. 48.

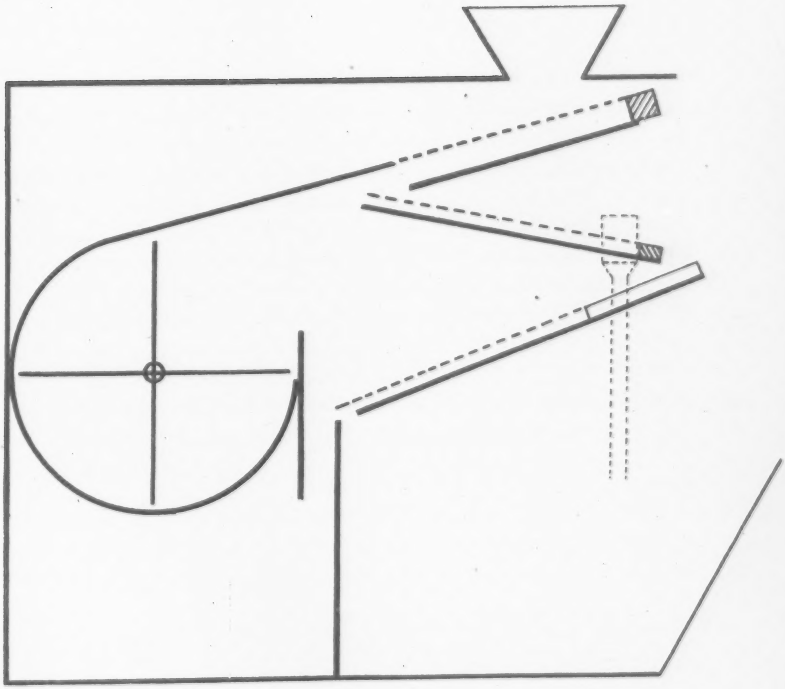
He states that he sometimes used screens and sometimes sieves, depending upon the kind of wheat he was cleaning; that is, the state it was in. It will be seen by looking at the model that the screens or sieves slide in and out, and were therefore removable, so that he could substitute one for the other.

This witness (John Bean) describes the purpose and effect of his machine as follows:

"The operation of this sieve and board was to get a longer run of my wheat, thereby carrying off from the wheat a

Bean's Machine.

1853.



[larger] proportion of the coarse material in grain—filth, white cap and oats. The wheat went through the sieve and the filth was carried off. (Record, p. 45, Ans. 8.)

"By the arrangement of this machine, I get a longer run of the wheat and a double sifting in a smaller space than in the old-fashioned machines, thereby cleaning the wheat more perfectly. (Int. 17).

The wheat passes through more screens and sieves, with boards beneath for the purpose of carrying the wheat back and sifting it over. It has a short motion, quicker than the motion in the old-fashioned mills, and a square shake. (Int. 19, Record, p. 48.)

The direction of the grain was opposite to the shake; while the grain runs forward, the sieves shake from *side to side.* (Int. 5, Record, p. 45.)

Cross-Int. 10. How many sieves or screens did you ordinarily use in the machines you manufactured when in use?

Ans. From four to seven. (Record, p. 47.)

Cross-Int. 15. What knowledge have you as to the practical use and operation of these machines?

Ans. My knowledge has been quite extensive. I have used them myself and seen them used in Hudson, Mich., from 1855 to 1860. They gave the best satisfaction and worked well.

In this machine we have all the elements of the first claim of appellee's re-issued patent. The zig-zag sieves and boxes, the lateral shake motion, the grain passing consecutively from one to the other and for exactly the same purpose as the same devices are employed in the appellee's re-issued patent.

COMPLAINANT'S PATENT IS VOID FOR WANT OF PATENTABLE SUBJECT MATTER.

Apart entirely from the question as to the novelty of the devices, or combination of devices, claimed in Booth's patent, we contend that his patent is fatally defective by reason of the absence of patentable subject matter in the claims, in the following particulars:

I. *As regards the zig-zag position of the screens and boxes.*

There is no new function performed which is due to the zig-zag position of the screens and boxes, and there is no invention involved, but solely mechanical skill, it being a mere arrangement of parts effecting economy of space and nothing more.

It is evident that the appellee does not expressly claim this zig-zag arrangement of screens and boxes, but only describes them as zig-zag screens and boxes, and that the claim is limited to these devices having a lateral shake motion.

The zig-zag arrangement is a very obvious one, employed to economize room in the machine. It involves no new mechanical principle, but is a mere change of position of the parts without any change whatever in the operation of the machine.

We have seen that the zig-zag arrangement was not new with the complainant, that it was known and used before his alleged invention, but even if it had not been used before, such a modification is one of form and not of substance, and involves no invention whatever, but merely the exercise of mechanical skill.

That invention is necessary to sustain a patent, as distinguished from the exercise of mere mechanical skill, is a proposition so well established as scarcely to need the citation of authority.

This question is fully considered and various pertinent authorities cited in the case of *Dunbar vs. Myers*, 94 U. S. Rep., 187.

II. *As regards the lateral shake motion.*

1. There is nothing patentable in giving a side shake to the screens and boxes, when they have before been used with an end shake, in the absence of all proof of any beneficial result in the operations of separating or cleaning. Such change is merely the exercise of mechanical skill and not of invention.

The appellee has not attempted to prove that there is any beneficial result arising from the use of the side shake, as distinguished from the end shake. There is nothing in the whole case to show that there is anything whatever of utility in shaking in one direction more than another. It does not rise even to the dignity of mechanical skill; still less of invention. Whether the shake shall be an end shake or a side shake depends merely on the accident of the position of the link which gives the shake motion at the end or at the side of the machine; and in all such cases it is incumbent on the patentee to show some new and useful result arising from such change before he can claim to have made a patentable invention.

It does not follow as of course that a mere difference of the direction in which the screens are shaken, entitles a party to the exclusive right to shake his machines in that direction. There is no new mechanical device employed and no new principle of construction. The fact is, as before stated, that in his original patent there is no allusion to the direction of the shake, he simply says that "a shake motion is given to the screens and boxes by a connecting rod K," and in the claim he says "having a shake motion given to them." When, however, he discovers that his patent is anticipated in all its features as claimed, he makes use of the fact that in his drawing the crank is represented at the side of the machine, to base his claim in the re-issued patent on the lateral shake, and introduces into his specification a statement of the superior efficiency of this side motion, which is entirely new matter, and which is proved

to be fallacious by the uncontradicted testimony in the case. Thus we see that this patentee obtained his re-issue by an unwarrantable allegation of the superior value of the lateral shake.

As before remarked, this feature of the side-shaking of the screens and boxes so limits both claims as to operate as an admission that if an end shake is used, such construction, or rather *operation*, takes the machine out of the scope of the patent. So the patentee himself admits, and so his expert, Osgood, testifies.

Surely it is a mere question of mechanical skill to place the shaking device at either side or end of the machine, and thus produce either a lateral or end shake.

We contend that this consideration alone proves that the patent is void, involving, as it does, a mere manual change in the mode of use, which is unpatentable.—*Kirby* vs. *Beardsley* 3, Fish 265.

2. There is no co-active combination between the side shake, as distinguished from the end shake, and the zig-zag position of the screens and boxes.

As we have just stated, appellee does not attempt to prove that there is any peculiar efficiency in the side shake. John Bean, one of the appellant's witnesses, says, that the end shake is better than the side shake (Bean's Dep., Ans. 17, Record, p. 46), and there is nothing offered by the appellee to contradict this opinion; but whether he is correct in this opinion or not, it is clear, that so far as the zig-zag position of the screens and boxes is concerned, the effect of the end shake or side shake would be the same whether the screens and boxes be placed zig-zag, or whether the screens be inclined in one direction and the boxes in the opposite direction. This being the case, there is nothing in the side shake as applied to the zig-zag screens, which would not equally apply to screens inclined all in the same direction,

and even the re-issued specification does not indicate any co-active operation between the *relative* inclination of the screens and the direction of the shake.

We insist, therefore, that this feature of his claim has in it nothing that is patentable.

3. There is no result produced by the *side shake* as distinguished from the *end shake*, in the connection between the screens and boxes and the fan and blast spout.

The spout and fan in Booth's patent operate to separate the lighter particles of foreign matter from the grain after the screens and boxes have separated the sticks, oats and other large and heavier substances. The grain, as it leaves the lowest of the boxes or directing boards, drops into the spout, and whether the screens and boxes be shaken endwise or sidewise the grain will be deposited in the spout equally well, so that there can be no possible effect on the operation of the fan and spout, due to the direction of the shake of the board by which the grain is dropped into the spout. This is too evident to need further comment.

There is, therefore, no co-operation between direction of shake of the screen and boxes and the fan and spout, and consequently nothing patentable in this part of the second claim.

If, as we may now assume, from the patentee's claims, he does not assert himself to have been the first inventor of zig-zag screens and boxes, having a shake motion in the direction of the passage of the grain, nor of zig-zag screens and boxes, having an *end shake* in connection with a fan and spout; can he deprive the public of the use of such old and well known devices when the screens and boxes have a *side shake*, without any proof whatever that there is any new or improved result due to such change in the direction of the shake?

At best it is a mere question of mechanical skill, involving no new devices whatever.

III. *As regards the number of screens and boxes.*

1. There is no patentable invention in multiplying the number of screens and boxes beyond two sets, no new results attained; and that it is mere duplication of parts, and the exercise of mechanical skill only.

As is admitted by the appellee, and clearly proved by the testimony, screens have been used before his alleged invention, for separating foreign substances, such as oats, garlic, sticks, &c., from grain; that these screens have been inclined or sloped, one end being higher than the other, so as to allow the grain or foreign substances to run down them; that they have been furnished with directing boards or boxes, to catch and conduct the grain falling through the screens; that such inclined screens have been placed one above another so as to run the grain from one screen to another, and that these screens and boxes have had a lateral shake motion communicated to them, for the same purpose as the shake motion is given in appellee's machine.

In Booth's patent there are eight sets of screens and boxes shown in the drawing. In the re-issued specification it is not stated how many are to be used. He says, "this invention consists in the employment and use of zig-zag screens and boxes or passages." Will the Court undertake to say how many screens and boxes come within the provisions of the claim? Two such evidently fulfil the requirements of the specification, and the appellee's expert, Rufus Osgood, says it would require more than *one*. (Record, page 42, Cross 6.) He afterwards says he thinks a series would require more than *two* (Cross 10), and again, that he thinks *three* screens and boxes would be within the scope of the patent (Cross 16, page 43.) If, however, the patent says only "screens and boxes" and the drawing shows eight sets, surely it must either include any number over two, or be confined to the exact number shown. It is not entirely an arbitrary distinction to require *three* as the lowest number that can be used to infringe the patent?

It is in this view of the scope of the claim, as contended for by appellee, that we hold it to be void for want of patentable

subject matter, for if it be patentable to use *three* screens, when two have been used before, merely because it removes more of the foreign matter, then the introduction of a *ninth* screen would entitle another party to a patent, although Booth had used *eight*. It is a mere question of mechanical skill to increase the number of screens and boxes to carry on the operation for a longer time and over a larger screening surface.

"A mere carrying forward or new or more extended application of the original thought, a change only in form, proportions, or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will sustain a patent."—*Smith vs. Nichols*, 21 Wall. 112–119.

2. Between the parts so duplicated there is no new combination, because there exists no new co-active operation beyond what exists where two such sets are employed.

The function performed by each of these screens and boxes is precisely the same as that performed by any of the others. One screen of three times the length of a single screen would do the precise work of three zig-zag screens. In placing two such screens and boxes together in zig-zag direction, the upper one deposits its grain in the top of the succeeding screen, and so far they co-act to produce the desired result; but if a third is added it merely does the same thing, and so on of a fourth and fifth. The same function is performed in exactly the same way, and the number of screens to be advantageously used depends, as John Bean tells us in his testimony, on the character of the grain to be cleaned. If there is a larger amount of oats or other foreign matter, it will require a more extended screening surface to effect a complete separation. This is mere *duplication of parts*, with no *new* result whatever. Surely this, if anything, comes under the idea of mechanical skill, as distinguished from invention. And mechanical skill is not patentable.

The question of patentable invention in the duplication of old devices, using two deflecting plates, one on each side of a saw, where one had been used before, was considered in the case of *Dunbar vs. Myers*, 94 U. S. Rep. 187, and it was decided that

such a change in a machine required no invention and was not patentable.

There is nothing new in the multiplication of parts.—*Nelson J. Wilbur* vs. *Beecher*, 2 *Blat* 132.

IV. *As to the connection of the screens and boxes (separating devices,) with the fan blast and spout (winnowing devices):*

1. In such connection there is no co-active operation, because neither element of the combination receives any aid from the other, nor performs its functions any better, or in any different manner by reason of such connection.

In the second claim the patentee claims a series of zig-zag screens and boxes having lateral shake motion, *when connected* with the fan and spout.

We contend that irrespective of the question of novelty this is not a valid claim, because in this case there is a mere *connection*, a bringing together in the same machine of two separate devices, performing different functions, where neither of the devices aids the other in the performance of its peculiar duties, but each operates in that machine just as it would do if they were separated; and therefore that this is not a *combination* in the sense of the patent law, and is not patentable.

These two devices, although placed together in the same machine and operated at the same time by the same motive power, are even more distinct than in many other machines previously used for the same purpose, because the screens for separating the oats from the wheat perform their peculiar function entirely apart, and without any aid, from the fan and blast spout; and the fan and blast spout separate from the wheat the dust and lighter impurities without the aid of the separating screens; and these two operations in the appellee's machine are performing quite distinctly, one after the other, and not at the same time in the same grain; so that really it consists of two ma-

chines, which are easily separable and would perform their respective functions in precisely the same manner, and with the same effect, if they were in different rooms, as they do when placed in close connection.

These two parts of the machine may be distinguished as the separating devices and the fanning devices; they both in fact effect a separation between the wheat and other substances, but the distinction in operation is that the separating devices remove from the wheat the oats, sticks and other foreign matter of *larger size* than the grains of wheat, leaving with the wheat the smaller impurities: while the fanning devices remove from the wheat the cheat and dust and other foreign matter of *lighter weight* than the grains of wheat; the separation in one case being effected according to the relative *size* or length of grain of the articles to be separated, and in the other case according to the relative *specific gravity* of the matters subjected to the action of the blast.

The fanning devices consist of a fan enclosed in a fan case, and a vertical spout leading from it; the separation being effected by pouring the grains of wheat into the blast spout, while a blast of air is driven up it of such force as to carry upwards all matters lighter than the wheat, and to permit the sound grains of wheat to fall downwards.

The separating device consists of shaking screens or sieves perforated with holes large enough to allow the grains of wheat to pass through, while the grains of oats, sticks and other foreign matter of larger size, do not pass through.

Now it is obvious that each of these devices performs its functions separately. It is not until the grain is separated from the foreign substances of *larger size*, and that operation is complete, that it passes to the fanning device to be cleaned by removal of foreign substances of lighter *weight* by means of a blast fan. Neither operation in any way aids the other, and the lateral shake of the screens and boxes cannot have the remotest effect on the operation of the fan blast and spout.

As Judge Woodruff says in *Sawyer vs. Bixby*, 9 Blat., 361, 'it may be useful to combine two results by employing two instrumentalities, but it is not patentable.'

It is now well settled law that the elements of a mechanical combination must co-operate to produce a desired result, and that such result must be not merely the sum of the results of each separate device, but a further result due to such combination; otherwise it is a mere aggregation of devices, and is not patentable.

Hailes vs. Van Warner, 20 Wall, 354.
Rechendorfer vs. Faber, 92 U. S. Rep., 347.

Such is eminently the case in the present instance. But the patentee does not even claim a combination, but a '*connection*' of the screens and boxes having a lateral shake motion, with the fan and spout. By the very words of his claim he puts his alleged invention out of the category of a combination, and confesses it to be a mere aggregation.

APPELLEE NOT ENTITLED UNDER THE PLEADINGS TO A DECREE FOR PROFITS AND DAMAGES.

Under the sixth assignment of error (Brief, p. 6) we contend that the Court was in error in decreeing that the "complainant do recover of the defendants the profits, gains and advanatges which the defendants have received, * * and also such damages in addition to said profits as the complainant may have sustained by reason of said infringements."

Our point is that there is no specific prayer for an account of profits and damages, and that that portion of the bill which precedes the prayer refers to profits only and not to damages.

The authorities we rely on are

Livingston vs. Woodworth, 15 How., 546–559.
Waymouth vs. Boyer, 1 Ves., p. 416–426.
Equity Rule No. 21.

This point will be more fully stated and discussed when we consider the alleged errors arising in exceptions to the Master's Report.

EXCEPTIONS TO MASTER'S REPORT.

The Appellants' exceptions to the Master's report which were overruled, may all be condensed into five, viz.:

First. The allowance to appellee of expenses and counsel fees, as damages.

Second. The allowance to appellee of the appellants' entire profits on the machine, instead of only that proportion of the same which was due to or arose from their use of the patented feature.

Third. The allowance to the appellee of profits on all the machines sold by appellants, when there was no proof and no presumption that the appellee would have received such profits in case the appellants had not manufactured and sold such machines.

Fourth. The failure to credit the appellants with the value of the improvements of their machine over the patented machine.

Fifth. The amount awarded to the appellee is exorbitant and out of all proportion to any possible or proved value of the alleged invention.

FIRST. THE ALLOWANCE TO APPELLEE OF EXPENSES AND COUNSEL FEES, AS DAMAGES.

The Master reported (p. 17) that the appellee was entitled to recover as damages, his expenses in conducting this suit, and allowed items 1, 4, 11, 12, 13, 15, 19, 23 and 24 of appellee's account, printed on p. 110. Of these, item 12 ($300) is for counsel fees, and the others are for traveling expenses of himself and counsel in the prosecution of the suit. In his bill of complaint, appellee avers no damages, and makes no prayer for damages. He prays specially for profits. He is therefore not entitled to damages.

It is questionable whether the appellee was entitled to a decree for either profits or damages, for the reason that there is no specific prayer for either in his bill, (see this Brief, page 2.) But if that clause of the bill which commences: "To the end therefore that said defendants may respectively full true and perfect answers make, &c." be regarded as a part of the *prayer* of the bill, which we submit it is not, even then the prayer only asks for the *profits* of which the defendants have deprived your orator, &c. No mention is made of damages, nor even of profits which the defendants (appellants) have made, but only the profits of which they (appellants) have deprived the appellee. Now the fact is, there is no proof whatever that the appellee (Booth) would have made any of the

profits of manufacturing the machines, which the appellants made; failing such proof, nominal damages only should be awarded.

Our position that no more can be decreed or awarded to the appellee than he prays for in his bill, is, we submit fully sustained by the authorities and the rules in Equity established by this Court.

In the case of *Waymouth* vs. *Boyer*, 1 Ves. jr. 416–426. "Interest was asked, but the demand was resisted, because the plaintiff had not prayed it in his bill; and upon the ground that there is no case for it upon an unliquidated account. *Buller, J.* The last reason given might be an answer; but the other, that it is not prayed is a better."

In *Livingstone* vs. *Woodworth* 15 How. 546–559, this Court say: "We think the second report of the master and the final decree of Circuit Court, are warranted neither by the prayer of the bill, by the justice of the case, nor by any well established rules of equity jurisprudence;" showing that the recovery must be warranted by the prayer.

But the 42d Rule in Equity, we submit, settles the question against the right to a relief not specifically prayed for; we quote: "The prayer of the bill shall ask the *special relief* to which the plaintiff supposes himself to be entitled, and also shall contain a prayer for general relief."

These expenses to be recoverable, must either be profits or costs. Evidently they were not the former; if the latter, they were taxable by the clerk, and the master had nothing to do with them. Being neither profits nor taxable costs, they cannot be recovered.

As to the allowance of counsel fees we cite *Philp vs. Nock*, 17 Wallace 460 (opinion by Mr. Justice Swayne,) in which it was held that, "*Counsel fees cannot be included in the verdict.*" The opinion goes on to say:

"The instruction under consideration was too broad and too vague. The jury could hardly have doubted that it was their duty to allow the counsel fee paid or to be paid by the plaintiff, and perhaps other charges and expenses equally inadmissible."

SECOND, THE ALLOWANCE TO APPELLEE OF APPELLANTS' ENTIRE PROFITS ON THE MACHINE, INSTEAD OF ONLY THAT PROPORTION OF THE SAME WHICH WAS DUE TO OR AROSE FROM THEIR USE OF THE PATENTED PART.

This point is based on exceptions 13–18, and it involves the consideration of the following questions:

(1) What is covered by appellee's patent?

(2) What proportion of appellants' profits was due to their use of the patented invention?

(1) *What is covered by appellee's patent?*

This question is fully discussed in a former part of this brief, beginning on page 11, and we will not now take further space for it. Briefly stated, it may be said that the patent covers the machine, if the screens are shaken sideways, or laterally to the run of the grain, but that it does not cover it if the screens are shaken end-ways, or in the direction of the run of the grain.

So says the appellee's expert, Osgood, (p 43, X Q 18 ;) and also the appellee. He is asked (p 116, X Q. 31,) "Suppose your machine were provided with an end-shake, would that be, in your opinion, within your patent?" He answers, "It is not, unfortunately, for me."

(2) *What proportion of appellants' profits was due to their use of the patented invention?*

The invention not being then for any article, machine or combination; that is to say, not for the screens, or boxes, or combination of screens and boxes or other devices, they must not be allowed to enter into the question of the value of the appellee's invention. It is admitted that the end shake and the side shake were both old in grain separating machines. The only question then is, what was the value of the side shake over the end shake in appellee's machine as applied o com bined screens and boxes, as covered by the first claim; or as applied to the connection of screens and boxes with a fan and spout as covered by the second claim? On this point there is no evidence whatever in the original case. The only proof of utility was the evidence of George J. Whitney (p. 63) who says he used four of the machines and (p 63, q 4) that "they worked better than any machine I ever used or have ever seen used in a mill for the separation of different kinds of grain." There is here no proof of special utility of the side shake. Nor does it appear what other machine or machines Whitney had used or seen used.

On the question of the comparative efficiency of the side and end shakes, the appellee (p 115) says, "The comparative value and efficiency of the two kinds of machines, end and side shaking, depends all upon varying circumstances. Under some circumstances the end would be as valuable as a side shake."

Bean says, (p 46, Q. 17,) "I have had a good deal of experience. I have made hundreds both ways; I consider the motion which shakes *end-wise* from the fans, or in the direction opposite to the one in model 'Bean,' *superior for the purpose of separating oats from wheat*, for the reason that the oat being heavier at one end, the end motion turns the heavier end forward and slides it over the screen without bobbing it around, while the wheat being shorter, falls through."

Baxter says, (p 70, Q. 16, 17,) that if the machines are in order and the riddles are level, there is no difference, in his opinion, between the efficiency of the *side* and *end* shake, but that if the riddles get slightly lower at one end, the *side* shade has a tendency to draw the grain to one side, a very deleterious effect, and not one produced by the end shake.

Turner says, (p 120, Q 27,) "There is really no difference whatever between a side shake and an end shake of a set of zig-zag riddles; that is, in their efficiency in cleaning. I know this from practical experience. We built a zig-zag machine as an experiment and shook the riddles end-wise, and we came to the conclusion that there was no practical difference as to the result of its cleaning or separating * * I don't know as the end shake or the side shake would make any difference in the *saleability* of the machine."

And (p. 121, Q. 38)

"The main difficulty that I have always found with the zig-zag lateral shake, is to keep the grain properly distributed on the riddle. They have got to be perfectly adjusted as to motion one way and the other, or the grain will incline to one end of the riddle, incline to run off, and run over the riddle, and thus produce a waste. This is a difficulty that I have always found in the *lateral* shake. The same difficulty does not exist in the *end* shake, when the shake is in the direction of the running grain."

The evidence further shows that a separator, known as the "Moline Machine," having zig riddles and *end* shake, has nearly superseded all other machines.

Booth's testimony, p 116, X Q. 36.
Turner's testimony, p 120, Q. 28–33.

And further, that appellants' sales of the zig-zag machine having *side* shake, have ceased, and that they are now making a zig separator having an *end* shake like the Moline machine.

Turner, p 134, Q. 134–6; p 120, Q. 34.

Thus it is clearly proven that the side shake has no increased efficiency over the end shake, and that any derangement of the machine renders it worse than the end shake.

If then the patented invention does not increase the efficiency of the machine, is it of any advantage in mechanical construction?

It appears from the evidence of Turner that by the arrangement of the shaking devices in appellants' machine to obtain a side shake, there was a saving of from one dollar to a dollar and a half over the arrangement necessary to produce an end shake.

Turner, p 138, R. Q. 1.

While this evidence does not refer expressly to appellee's machine, yet it is the only evidence we have of any value of the side shake over the end shake, and may for that reason be taken as a proof tending clearly to show the trifling character of the invention.

Appellee not having appealed, his exceptions to the Master's report will not be considered by this Court.

The appellee claimed as his rule of profits a license fee which he testified before the Master he received in 1859 and 1860, prior to the date of the re-issue. The Master, however, rejected this as a measure of damages or profits, and adopted as the rule, the profits appellants had made on the machine. The appellee excepted to the Master's report, but his exceptions were over-ruled and the report confirmed.

No appeal was taken by the appellee from the decree confirming the report of the Master, and hence his exceptions to that report cannot be considered here. We cite the following authorities on this point:

In *Canter vs. The American Insurance Company* (3 Peters, 307–318,) it was held that "a party will be deemed to have waived the claim for damages, unless he interposes an appeal or cross-appeal to sustain that claim."

In *Bates vs. Coe*, (8 Otto, 31,) the decree in the lower Court was in favor of complainant, and the case was referred to a Master to compute the gains and profits made by the respondents. Both parties excepted to his report but the Court confirmed the report and the respondents appealed. The complainant, however, took no appeal.

This Court say "*it is wholly unnecessary to notice the exceptions of the complainant, as he did not appeal.*"

THE RULE OF DAMAGES.

The well established rule of this Court in such cases is, that where an invention covered by a machine patent is only an improvement on previously existing machines, the complainant can only recover for the use of the improvement covered by his patent, and not for the *entire machine* as improved; and that, even *where it is difficult to separate the improvement from the entire machine, it must be done in estimating the profits*, for where the improvement is not separable from the entire machine the patent itself is, on that account, void; and that if the value of the specific improvement is incapable of proof, or in fact, not proved, only nominal damages or profits can be recovered.

In *Whitney vs. Mowry*, 14 Wall, 620–649, the Court says: "It is the additional advantage the defendant derived from the process, advantage beyond what he had without it, for which he must account. * * It is as true of a process, as it is of an improvement in a machine, that an infringer is *not* liable to the extent of his entire profits in the manufacture. The question is, what advantage did the defendant derive from using the complainant's invention over what he had in using other processes then open to the public."

This case was on a *process*, and not a combination of mechanical devices, but the same rule was applied by this Court, (citing *Whitney vs. Mowry*,) in the case of *Littlefield vs. Perry*, 21 Wall, 205–228, which was on a combination of devices in a stove. In that case it was held that the decree "would cover all the profits made upon a stove having in it any one of the improvements patented. The true inquiry is as to the profits which the defendants have realized as a consequence of the improper use of these improvements. Such profits belong to the plaintiff and should be accounted for to him. The account of the Master may not charge the defendants with more than the complainant is entitled to recover."

Mr. Justice Swayne says, in delivering the opinion of the Court in *Philp vs. Noch*, 17 Wall, 460: "Where the infringement is con-

fined to a part of the thing sold the recovery must be limited accordingly. It cannot be as if the entire thing were covered by the patent, or where that is the case, as if the infringement were as large as the monopoly. The plaintiff must show his damages by evidence; they must not be left to conjecture by the jury."

It is only for the plaintiff's invention that defendants have to pay.

Livingston vs. Woodworth, 15 How. 558.

In *Nicholson Pav't Co. vs. Elizabeth*, 6 O. G. 765, where the invention used by defendants was a patented improvement on that of the plaintiff, the defendants were allowed to deduct from their profits the amount they paid for use of the improvement.

"If the patent is for an improvement on a machine, the patentee is entitled to all advantage of the use of the patented improvement, *excluding* the profits of manufacture, and excluding the profits of the old machine." *McCormick vs. Seymour*, 3 Blat. 209.

The rule of damages is the profit in making *that part* of the machine in which the improvement consists.

Mason vs. Graham, 23 Wall. 261.
Tremaine vs. Hitchcock, 23 Wall. 518.
Littlefield vs. Perry, 21 Wall. 205.
Black vs. Thorne, 7 O. G. 176.
Buerk vs. Imhaeuser, 10 O. G. 960.

In *Gould's Mfg. Co. vs. Cowing*, 8 O. G. 277–279, Mr. Justice Hunt thus states the law: "Where a patent is for an improvement in machines, the damages are to be confined to the profits made by use of the improvement *only*, and *not* of the manufacture of the *whole* machine."

In that case the patent was an improvement in pumps, consisting of the addition of "a chamber of an important construction, and a *combination* with certain other parts described." The Master, in taking the account, held that the profits arising from the improvement of the plaintiffs could not be separated from the profits of the machine generally. But the Court held that the patented improvement *must be separable*, or distinguishable from the rest of the machine, as otherwise the patent would be void.—See *Gould's Mfg. Co. vs. Cowing*, 12 O. G. 942.

The Court further held that the burden of proof is on the plaintiff; and that where he fails to show the profits arising from the use of his improvement as distinguished from the entire machine, *nominal damages* only can be recovered.

In the case of *Garretson vs. Clark*, 14 O. G. 485 (Judge Blatchford,) the patent was for improvement in mop-heads, and the evidence showed that the patented article had driven all other mop-heads out of the market. The complainant offered evidence proving his profits on the entire article and claimed that he was entitled to the defendant's entire profits. The Court held that "the patentee must in every case give evidence tending to separate or apportion the defendant's profits and patentee's damages, between the patented features and unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative; or he must show, by equally reliable and satisfactory evidence, that the profits and damages are to be calculated on the whole machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature." The complainant having failed to do either of these things was awarded nominal damages only.

In the present case the appellee has utterly failed to distinguish his improvement, covered by his patent, from the entire machine, and has made no proof whatever of any profit arising from that which is covered by his invention.

His invention, as we have seen, is limited to a particular motion of a part of the machine; so that the identical machine, with the sieves shaken in the reverse direction, is not covered by his patent.

This being so, it would seem a hard measure of justice to award the profits on the entire machine to so slight and trivial an invention.

This is exactly the case in the mind of the court in the case of *Seymour vs. McCormick*, (16 Howard, 480,) when they say: "If the measure of damages be the same, whether a patent be for an entire machine or for some improvement in some part of it, then it follows that each one who has patented an improvement in any portion of a steam engine, or other complex machine, may recover the whole profits arising from the skill, labor, material and capital employed in making the whole machine, and the unfortunate mechanic may be compelled to pay treble his whole profits to each of a dozen or more several inventors of some small improvement in the engine he has built. By this doctrine, even the smallest part is made equal to the whole, and 'actual damages' to the plaintiff may be converted into an unlimited series of penalties on the defendant."

But appellee contends that because his machine is a *combination of devices* the patent covers the whole machine, and therefore he is entitled to profits on the entire structure.

But this would be manifest and gross injustice to the appellants.

If Booth had invented anything new, any new device or new feature in the machine, he would not be allowed to claim more than the profits on that part. And shall he be allowed to claim on the the whole machine, merely because by the form of his claim he has included as a combination or connection all the parts, which are all old, both *per se* and in combination.

The difficulty of eliminating what is new, is no reason for overcharging the defendants. We have shown that the true rule is to ascertain the feature of the combination which distinguishes the patented machine from what was open to the defendants to use without charge. And in this case it is the *lateral shake motion.* Take that away, and the machine is old and common property. The fact that the machine is a combination does not alter the rule for estimating damages or profits.

On this point we will cite the case of *Ingels vs. Mast*, 7, O. G. 836, in which the patent was for a combination of four elements in a seed drill, (sustained in 6 Fisher, p. 416.) An earlier patent (Strayer's) showed the combination of three of the elements. Complainant claimed that he was entitled to the profit on the entire combination, while defendant (citing *Whitney vs. Mowry*, 16 Wallace, 620) claimed that complainant could recover only for the additional profit that he had made by using the whole combination over what he might have made by using all except the checks, the only thing he had added to the combination of Strayer. Judge Emmons, referring to Mr. Justice Grier's opinion in *Livingston vs. Jones*, 2 Fisher, (reversed in *Jones vs. Moorhead*, 1 Wall, 155) says: "He seems to argue that the portion of the device which is improved must be taken as a unity, and that the complainant is entitled to its whole value as improved. We rule, for the present, on the contrary, that he [complainant] *is entitled only to the value of that which he has added, and that such a sub-division should be made.*"

While, however, it is incumbent upon the patentee to prove what profit is due to the patented invention, and while on his failure to do so he is entitled to nominal damages only; yet, if the court think he is entitled to recover something for the appellant's use of the improvement, we call attention to the only proof there is on the subject. It is the evidence of Turner, one of the appellants, which is as follows, to wit: P. 138, R. Q., 1.

"State whether in the construction of the Vaughn [appellants'] machine, when made with the side shake, there is any saving over the same machine made with devices for securing an end shake."

"*Answer.* In the construction of the Vaughn Machine the shaking of the riddle and the operation of the fan is done in the most simple way, using the least possible number of shafts and pulleys, and I think there would be a saving in that construction probably from a dollar to a dollar and a half over the way adopted by Mr. Booth's patented machine; or, I might say, by *any end shake.*"

In other words, while Mr. Turner thinks there would be a saving in mechanical construction over Booth's way of side shake, yet the arrangement of appellant's devices for *side shaking are from one dollar to one dollar and a half cheaper than any possible arrangement of end shaking devices.*

Now, giving appellee the greatest possible advantage of the only evidence there is of the value of his improvement, his profits or damages would be from one dollar to one dollar and a half for each machine.

It would appear, therefore, that the only advantage in the lateral shake of the screens and boxes is in the *cost of manufacture*, amounting to the sum of one dollar and fifty cents per machine.

This, then, we claim to be the true measure of recovery in the present case, if it be held that appellee is entitled to recover anyat all. The appellants were free to make the same machine that they did manufacture without liability to any one (excepting Vaughn, whose patent they own), if they had only given an end shake to the screens and riddles, instead of an side shake, and the result in efficiency of operation of the end shake would have been the same; and as the only difference is in the cost of manufacture, in favor of the lateral shake, (which they used), that difference of cost was the profit, and the only profit that accrued to them by reason of their infringement of the appellee's patent.

And this is the measure of damage or profits fixed by this court. All that the appellants can be required to pay is the actual profits derived by them by the use of that which is covered by the claim of appellee's patent, over any other mode of construction which the appellants had a right to adopt.

Serrell vs. Collins, 4 Blat. 61; 1 Fish. 289.
Seymour vs. McCormick, 16 How. 488.
Mowry vs. Whitney, 14 Wall. 620–649.
Gould's Mfg. Co. vs. Cowing, 8 O. G. 278.

APPELLANTS NOT WANTON INFRINGERS.

It will be well to refer to the position and conduct of the parties, as proved by the testimony, as this must, in a court of equity, enter largely into the estimate of the amount to which complainant is entitled.

Letters patent were granted to the complainant Booth on 20th December, 1859, which were re-issued on 29th November, 1864.

Letters patent were granted on 24th April, 1860, to James A. Vaughn, one of the defendants, for the machine for the manufacture of which this suit was brought against them by Booth.

In the testimony in this case Exhibit "B" is a model of the machine made by Booth under his patent, and Exhibit "C" the defendants' machine, made by them under the Vaughn patent.

The defendants' machine was not an infringement of Booth's original patent (see p. 176), so that they had a perfect right to manufacture machines under their patent. It was not until Booth re-issued his patent in November, 1864, that his claims covered the Vaughn machines.

Booth never made more than six, or at furthest eight, machines like Exhibit "B," that is, in conformity with the description in his patent. (P. 37, Cross-Int. 10; p. 101, Int. 3.)

On September 20th, 1859, Booth saw the Vaughn machine in defendants' shop. (P. 38, Cross-Int. 23; p. 103, Cross-Int. 27.)

He then, as we allege, in consequence of seeing Vaughn's machine, altered the construction of his machines, shortening the fan and placing it *across* the machine, thereby greatly improving its cheapness and efficiency.

He distinctly admits these advantages in the Vaughn machine over his, in his testimony, saying that "the arrangement in Exhibit 'C' is *much more economical in construction, less complicated, and more practically applicable to such use.*" (P. 39, Cross-Int. 26.)

He fixes the time when he made the first machine like Exhibit "C" (defendants' machine), as December, 1859. (P. 104, Cross-Int. 33.)

It is a significant fact that, after the first six machines, Booth never made any more like Exhibit "B;" all his subsequent machines being made like Exhibit "C" (defendant's machine.) (P. 37, Int. 11–12.

From that time up to the date of his re-issue, in November, 1864, Booth was manifestly the aggressor, while the appellants were not trespassing on his rights in any way.

Nor after the date of Booth's re-issue are the appellants to be regarded as infringers. The Supreme Court say, *Livingston* vs. *Woodworth*, 15 How. 560: "The applicants were using a machine patented by the United States to Hutchinson, and might well have supposed that the right derived to them from such a source was regular and legitimate. They were in no sense wanton infringers upon the rights of Woodworth." And they remark that in that case it would be peculiarly hard and oppressive to visit on the appellants any consequences in the nature of a penalty.

The position of the appellee in this case is not such as to entitle him to much consideration from a court of equity.

So soon as appellants had established the business of manufacturing and selling their Separators, which, up to that time at least, were no infringement of Booth's patent, he re-issues his patent with new claims, ceases to manufacture any machines under it (p. 38, Cross-Int. 21), and now seeks to recover from these appellants not only all the profits from the manufacture and sale of the *entire machine*, but also whatever profit he thinks he might have made had they been sold by himself.

The appellee started in the manufacture of his machines a few months only before the appellants. After making only six, he alters his machine to conform to theirs, which was confessedly cheaper and better; he then, in 1861 or 1862, discontinues the manufacture (p. 40, Cross-Int. 29), re-issues his patent to cover the appellants' machine, and now claims to reap all the fruits of their energy, ingenuity and industry. He claims that he could have supplied the public with machines if appellants had not done so (Booth's testimony, p. 101, Int. 7); an assertion entirely unsupported by any of the facts or probabilities in the case. He could not have made a saleable machine without infringing the Vaughn patent.

There is therefore no reason why the patentee should be favored in this case, as is sometimes necessary in order to render substantial justice.

THIRD, THE ALLOWANCE TO THE APPELLEE PROFITS ON ALL THE MACHINES SOLD BY APPELLANTS WHEN THERE WAS NO PROOF AND NO PRESUMPTION THAT THE APPELLEE WOULD HAVE RECEIVED SUCH PROFITS IN CASE THE APPELLANTS HAD NOT MANUFACTURED AND SOLD SUCH MACHINES.

This point is based on exception 10, Master's report.

There is no proof that the appellee would have made these sales. There is no legal presumption that he would have done so. Clear and conclusive proof is necessary to sustain such position.

Seymour vs. McCormick, 16 How., 490.
Buerk vs. Inhausen, 10 O. G., 960.
Garretson vs. Clark, 14 O. G., 485.

The fact is, that appellee could not and did not attempt to supply the demand. He was not making and selling his machine during the period of infringement. (P. 38, Cross-Int. 21; p. 37, Cross-Int. 12; p. 40, Cross-Int. 29.) The public had not recourse except to appellants. The appellee's market seems to have been in Western New York and Chicago (p. 37, Cross-Int. 9; Ford letter, p. 182), while a large number of the appellant's machines included in the account (p. 182–187) were sold in St. Louis, Baltimore, Boston, Cleveland and other places, new fields sought out by appellents, and into which they succeeded in introducing their machine at great expense (p. 118, Int. 18).

In *Seymour vs. McCormick* (16 Howard, 490), the Court say, "Actual damages must be actually proved, and cannot be assumed as a legal inference from any facts which amount not to actual proof of the fact. What a patentee would have made

if the infringer had not interfered with his rights is a question of fact and not a judgment of law. The question is not what speculatively he may have lost, but what he actually did lose."

In *Buerk vs. Imhaeuser* (10 O. G., 960), Judge Johnson says, "It is not enough that he may have suffered loss, for he cannot have compensation for conjectural losses. The losses must be proved and not guessed at. It was not made to appear that the plaintiff could have sold his watches to the persons who purchased from the defendants; * * it cannot be known that those who bought the infringing article would have bought the plaintiff's watches under any circumstances."

We therefore submit that as the appellee has not *proved* that he would have made these sales, and that if he had made them he would have received the profits appellants did, he can have nominal damages only.

FOURTH, IN NOT CREDITING APPELLANTS WITH THE VALUE OF THE IMPROVEMENTS IN THEIR MACHINE.

This point is based on Exception 11 to Master's Report.

The appellee's machine has the blast spout at the side. In this position it covers one-half of the riddle and makes them difficult of access for cleaning. It also necessitates the use of spouts to carry off the offal, which increases the weight to be shaken and renders the machine cumbersome.

Turner, p. 118, Int. 12.
Baxter, p. 72, Ints. 32–35.

It has a *long* fan arranged at the side of the machine. The supply of air to the fan is defective at the centre, and this prevents a perfect separation.

Turner, p. 117, Int. 7.
Baxter, p. 71, Int. 24–26.
Hollinsworth, pp. 65–67.

The Vaughn (appellants') machine has a *short* fan of large diameter, arranged at the end so as not to obstruct access to the riddles; being short, the fan is well supplied with air and made a perfect separation; the capacity of the machine can be increased by increasing the length of the riddles, but this does not, as in the Booth machine, necessitate an increase in the length of the fan.

Turner, p. 117, Ints. 3–6.
Baxter, p. 69, Int. 7–11.

The saleability of the appellants' machine was due to these differences from appellee's machine. *Baxter*' p. 72, Int. 37.
Turner, p. 118, Int. 13½.

Booth saw the Vaughn machine on September 20th, 1859, (p. 38, Cross-Int. 23), and immediately ceased making his machines like his patent (Exhibit B) and began to make them like Exhibit *C* (Vaughn's machine). p. 37, Ints. 9–12.

Booth admits the superiority of the appellants' machine, and says, in comparing it with his own machine, "the arrangement, as in Exhibit 'C,' is much more economical in construction, less complicated, and more practically applicable to such use." (P. 39, Cross-Int. 26.)

In his rebutting testimony before the Master, he says (p. 144) "*I would say that the Vaughn structure can be built for less money, at least* 20 *per cent.*, for the reason that Booth's plan had larger sieves, with the fan set so far from the trunk that it took more material; the crank shaft and balance wheel also added to the expense."

And on p. 105, Cross-Int. 43, he further says that "the plan of construction [like Exhibit "C," defendants' machine,] is more economical."

And on p. 100, Int. 5, he says "the defendants' machine can be made for less money."

The machines correspond exactly in size and capacity (p. 100, Int. 4).

Thus the patentee admits the value of appellant's patent and construction to be at least 20 per cent. of the cost of his own machine, and yet the Master ignored the evidence and failed to allow appellants this credit. We submit that under this exception we are entitled to a credit of 20 per cent. of the total amount found against the appellant as profits.

FIFTH, THE AMOUNT AWARDED TO APPELLEE IS EXHORBITANT, AND OUT OF ALL PPOPORTION TO ANY POSSIBLE OR PROVED VALUE OF THE ALLEGED INVENTION.

If we consider the exceedingly trivial nature of the improvement covered by the claims of appellee's patent, the amount of over eleven thousand dollars, awarded to him, must surely be regarded as extravagant.

It appears, as we have already seen, from the testimony in this case, that the appellants were manufacturing their machines under a patent granted to James A. Vaughn, one of their firm, which bears date only four months subsequent to that of Booth. The machine thus made by them under their patent was no infringement of appellee's patent previously to the date of his last re-issue, and then only because they gave their sieves and boxes a side shake, as they had always done. Booth and Vaughn were independent inventors. Each had improved on the old type of machine, consisting of shaking sieves and boxes, with a fan blast and spout. But Booth located his fan differently from Vaughn, and the consequence was that the Vaughn machine was so superior to Booth's that Booth abandoned his construction after seeing defendant's machine, and commenced to manufacture machines after Vaughn's patent. The advantage of the Vaughn improvement is set forth in Specification (Record, p. 200), and its superiority over his own machine is admitted by Booth in his testimony.

These facts show not only that Booth discontinued the manufacture of his machines made after the model of his patent, but lead to the inevitable conclusion that he did so because his machine was not a success. After making some 100 or 150 of the Vaughn machines he re-issues his patent, and then, with the full knowledge of what the appellants were doing, he lies on his oars and waits until his patent is nearly expired before bringing suit against them. All this goes to prove that the Booth machine is of no practical value, and was useful only as it was altered to conform to the Vaughn patent. Under these circumstances the appellee not only did not, but could not, supply the market; so that to give him all the profits made by the defendants on their entire machine, on the presumption that they had deprived him of these profits, is to base the award on a supposition which has no foundation in fact, and is contradicted by all the evidence.

W. BAKEWELL,
T. B. KERR.
Counsel of Appellants.

OFFICE SUPREME COURT U. S.
FILED
MAR 9 1880
D. W. MIDDLETON, Clerk.

IN THE

Supreme Court of the United States.

GEORGE PARKS, ET AL.,
Appellants,

against

JONATHAN L. BOOTH,
Appellee.

BRIEF FOR APPELLEE.

This is an appeal by the Defendants from a decree in favor of the Plaintiff, made by the Circuit Court of the United States for the Northern District of Ohio.

The bill was filed on the 21st of April, 1871, for an injunction against the defendants, and an account by them as infringers of the plaintiff's patent for an improvement in grain separators. The patent was originally issued September 20th, 1859, surrendered and re-issued the 25th of September, 1860, and again surrendered and re-issued November 29th, 1864. The patent expired by its limitation, September 20th, 1873, and as the interlocutory decree was not passed

until May 9th, 1874, (see page 12 of the record,) it of course, did not provide for an injunction, but after adjudging the validity of the plaintiff's patent and that the defendants had infringed the same, it directed that it be referred to Mr. Beach as Master, to take and state an account of the gains and profits that the defendants had received from the sale of their infringing machine. The Master's report was made the 24th of November, 1875, and will be found commencing upon page 13 of the record. By reference to the recapitulation on page 17, it will be seen that he charged the defendants with profits on the machines sold, ... $12,045.09

LESS.—A credit of the amount collected by the plaintiff from other parties 2,101.00

$9,944.09

He also charged them with expenses incurred in prosecution of suit 627.20

And compensation for time 420.00

$10,991.29

(NOTE:—There is a mistake in the record as printed at top of page 18. The sum should be as above stated instead of $10,901.29.)

Exceptions were filed to the Master's report by both parties. The Court overruled the plaintiff's exceptions and as he has not appealed they need not be considered. The Court overruled the defendants' exceptions, except to disallow the item compensation for time $420.00, and by its final decree (page 30, fol. 60), adjudged that the plaintiff was entitled to recover the sum of $10,571.20 on account of profits, with interest thereon from the date of the report, November 24th, 1875, to the passing of the decree December 15th, 1876, with costs. The defendants

moved, doubtless, by the stirring of their consciences, presented a petition (page 31, fol. 62), that the decree should be increased by the further allowance of $48.00 for one machine not included in their account with the interest thereupon, amounting to the sum of $51.53, and the decree was, upon such petition, accordingly amended by the addition of the sum of $51.53 thereto. (See page 32, fols. 64 to 66 of the Record).

The testimony, other than the exhibits, upon the issues raised by the bill and answer, commences at the top of page 34, and extends to fol. 144½ on page 64.

The testimony upon the accounting, other than the exhibits, commences at fol. 145, page 64, and extends to fol. 379, page 145.

The defendant also put in evidence upon the question of the novelty of the plaintiff's device, sundry patents which so far as necessary will be properly referred to hereafter.

The defendants' account before the master, of machines sold and prices, will be found at fol. 452, page 182, to the middle of page 187.

The plaintiff claimed that the defendants had infringed his Letters Patent by manufacturing at Cuyahoga Falls, in the northern district of Ohio, machines embracing the improvement, the right of which was secured by such letters to him. The answers of the defendants denied that the plaintiff was the first and original inventor, and set up prior knowledge in a great number of different persons, and that the plaintiff's invention was anticipated by a number of Letters Patent. A certified copy of the plaintiff's re issued Letters Patent, will be found at

page 145 of the Record, and was plaintiff's exhibit A. A model of the machine or device, described in his specifications, and illustrated in the drawings attached, was his exhibit B, which model will be produced. A model, which is a representation of the machine manufactured and sold by the defendants, is exhibit C, and will likewise be produced. A drawing illustrating that machine appears several times in the record, and will be found to face page 174. A comparison of this model and drawing, with the device described in the specifications attached to the plaintiff's Letters Patent with his model, will show that they are one and the same thing, with scarcely a formal difference. This is testified to by the plaintiff—page 34, fol. 69 of the record—and by Mr. Osgoode, page 40, fol. 82.

The plaintiff's device consists of a series of zigzag screens, with a solid surface under each perforated surface, which have a motion at right angles to the movement of the grain over the screens, after which the grain passes into a vertical current of air produced by a fan through a vertical spout. There are also troughs or chutes to receive the substances discharged over the edges of the screens, and convey them to either end of the machine, where they may be gathered and removed. The last screen in the series is a cockle screen, the perforations being too small to admit the passage of wheat, and the wheat is discharged from ~~the screen next above~~ the cockle screen into the flue, where it is subject to the action of the current of air produced by the fan, and falls through such current underneath the machine; the light impurities being expelled from the grain by the fan blast.

The purpose accomplished is the removal from the grain of various substances which have been left

therein in the process of winnowing, by a single operation. This is accomplished by the discharge over the edges of the screens of the substances too large to pass through the perforations thereof, by the discharge through the last screen of the substances smaller than the grain, and the removal by the current of air, of dust and other light impurities, which pass with the grain into the fan spout or flue.

We are now prepared to take up the various objections urged by the defendant to the validity of the plaintiff's patent, and I submit.

FIRST.

The plaintiff's invention is not a mere aggregation of parts having no co-operative or reciprocal action, but is a combination of parts co-operating with each other, and producing a new and useful result.

The doctrine upon this subject is well stated by Mr. Justice Curtis in *Forbush vs. Cook*, *20th of Law Reports*, *664*, and quoted in *Curtis on patents*, *4th edition*, *section 111*, *Note 2*.

That learned Judge says: "To make a "valid claim for a combination, it is not ne- "cessary that the several elementary parts of "the combination should act simultaneously. "If those elementary parts are so arranged "that the successive action of each contrib- "utes to produce some practical result, which "result when attained is the product of the "simultaneous or *successive* action of all the "elementary parts, viewed as one entire "whole, a valid claim for thus combining "those elementary parts may be made."

See also Emerson vs. Hogg., 2 Blatchford, 8.
Hogg vs. Emerson, 6 Howard, 437.
Hogg vs. Emerson, 11 Howard, 587.

SECOND.

The plaintiff's device possesses patentable novelty and is not void for want thereof, as claimed by the defendants.

The defendants' is the stereotyped contention of infringers, that the patentee has not invented any one of the several parts of his combination, and therefore is not the inventor of the combination. Applied in this particular case, it is urged that the plaintiff is not the inventor of the zigzag position of the ~~screws~~ and boxes, or of the motion imparted to the ~~screws~~, or the number of ~~screws~~ and boxes, or the fan-blast and spout, and, therefore, is not the inventor of the device covered by his patent. That the fact that all the parts entering into a combination are as old as mechanical science, does not deprive a combination of patentability, has been so repeatedly and so often asserted by courts, that it seems strange that learned counsel should controvert it.

It is not pretended that the plaintiff was the inventor of the screens, or of screens in a zig zag position, or of the production of the current of air by a fan, or the compelling of the same to pass through a flue or spout. What is claimed is, that the plaintiff has combined and co-ordinated these various well-known mechanical devices into a single co-operative machine, by which grain can be freed at one operation from various foreign substances, the removal of which would otherwise require the use of several different pro-

cesses; that such combination is a new and useful improvement, and properly protected by patent.

See Cannington vs Nuttall, 5 House of Lords Cases, 205.

THIRD.

The plaintiff's patent is not shown to be void by reason of any of the devices relied upon by the defendants.

It is, of course, difficult to discuss such a question in a brief. That can be best done in open court where the models and drawings can be referred to. One fact, however, it is proper to call the attention of the court to, and that is, that no witness has been produced to show that any of the patents introduced in evidence by the defendant, or models produced by him, embrace the principle of the plaintiff's machine. If no witness could be called to give such evidence, the defendant has no right to ask the court to wade through these different patents for the purpose of ascertaining something that may protect the defendants in their invasion of the plaintiff's rights. Without attempting to discuss in detail the devices relied upon by the defendants, I will say that they do not seem to me to present any of the features of the plaintiff's machine. The combination of a series of zig zag screens and boxes with a motion at right angles to the course of the grain, in connection with the fan and its spout, will not, as I submit, be found in any of them. And this is all the argument that the matter admits of. When one asserts that two things having no

resemblance to each other are the same, the only way to meet it is by assertion to the contrary. The matter does not come into the region of argument.

FOURTH.

The defendants' machine is a clear infringement of the plaintiff's patent.

This, indeed, goes almost without saying. They are formally the same, with the exception of a slight difference in the position of the fan case, fan, and spout, and as might be supposed where the similarity is so great, the evidence shows that the defendants' machine was constructed after an inspection of the plaintiff's, and is a clear case of inexcusable piracy.

We are now prepared to take up the Master's report upon the accounting, and inquire what error, if any, there was therein. This matter is much simplified, as the Master has reported against the claim of the plaintiff in every respect save three :

1st. The defendants' profits.

2nd. The plaintiff's expenses.

3rd. Compensation for his time,

The third item was excepted to, and the exception allowed by the court below.

The second item was excepted to, and the exception disallowed. I do not see how this item can be sustained, and think that the exception should have been allowed.

The remaining item is the profits made by the defendants upon the machines manufactured by the defendants.

The whole number of machines made and sold by the defendants is 431. (See detailed statement made by defendants, commencing on page 22 of the record.) Of these 363 were sold to agents, so-called, being really persons who bought at a fixed price and re-sold to consumers. (See statement above mentioned. See also testimony of Parks as to Baxter & Co., folio 212; Halteman, folio 215; Todd & Co., folio 224, and as to all folios 227 and 8).

See also as to same machines sold to Turner, folio 225. The cost of these machines as estimated by the defendants themselves, is taken from their statement, and will be found on page 27.

The price at which the defendants sold the machines to so-called agents, is arrived at by taking the aggregate of the machines sold to them from the statement by their respective numbers and dividing it by the aggregate of that number in the statement. It is correctly done in the Master's report at page 16, folio 31. The price of machines sold to others than so-called agents is arrived at in the same way, and is found in the Master's report, fol. 32.

The defendants are charged by the Master with the price of the machines sold to the so-called agents, less the cost to manufacture, as stated in defendants' account, page 15 of the record. No other allowance was made for the simple reason that defendants, after the most abundant opportunity, declined to furnish an account of any other expenses. See folio 220, page 92, and folio 221, page 93, of the record.

As to machines sold to other customers, the defendants are charged with 25 per cent. on the cost, as profits, in accordance with the testimony of the defendants themselves, folio 230, page 96, of the record.

These profits the plaintiff was entitled to recover.

His invention was as described in his original patent "*a new and improved grain separating device.*" It was an entirety, not a separable improvement of some other device. Like the seat upon a harvesting machine, which was the McCormick case, nor an improvement in a process, as in Mowry vs. Whitney, 14 Wallace, 620.

The machine was a unit. As such it was made and sold by the defendants, and their profits upon it the plaintiff was entitled to recover. This was what the Master has allowed.

There was no other machine in the market of like character which the defendants might have made that would serve the purpose of the plaintiff's machine, folio 171, page 75, 319, p. 126, p. 203.

The case shows not only that the defendants have infringed the plaintiff's rights by pirating his machine, but that they have wantonly injured him by in every way obstructing him in his business, and by intimidating those who might otherwise have been his customers. They are certainly not entitled to any favorable consideration at the hands of the court.

W. F COGSWELL,
Of Counsel for appellee.